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ABSTRACT

The federal role in helping colleges provide graduate education is considered, as part of hearings on the reauthorization of the Higher Education Act of 1965. The question of whether there is access to graduate education is addressed. Attention is directed to the following concerns: the appropriate balance between undergraduate and graduate assistance; whether existing aid programs should be expanded to include graduate students or expanded to include more graduate students; what reasonable loan balances should be established for graduate and professional school students; and the impact of the federal government's efforts to expand access of minorities and women to graduate and professional education. Based on an Educational Testing Service study, it is suggested that some graduate and professional students who borrow heavily for school may encounter substantial repayment burdens and that, as tuitions climb, it is likely that student borrowing will also increase. Additional areas of consideration include the management of loan repayments, graduate fellowships that are targeted for minorities, the effect of heavy debt burdens on career choices, and whether students are pursuing professional degrees that take a shorter time to complete and that promise a higher payoff. (SW)

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HEARING ON THE REAUTHORIZATION OF THE HIGHER EDUCATION ACT OF 1965: THE FEDERAL ROLE IN ASSISTING COLLEGES AND UNIVERSITIES IN PROVIDING GRADUATE EDUCATION

ED247808

HEARING

BEFORE THE

SUBCOMMITTEE ON POSTSECONDARY EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR
HOUSE OF REPRESENTATIVES

NINETY-EIGHTH CONGRESS

FIRST SESSION

HEARING HELD IN WASHINGTON, D.C.,
NOVEMBER 16, 1983

Printed for the use of the Committee on Education and Labor

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HEARING ON THE REAUTHORIZATION OF THE HIGHER EDUCATION ACT OF 1965: THE FEDERAL ROLE IN ASSISTING COLLEGES AND UNIVERSITIES IN PROVIDING GRADUATE EDUCATION

WEDNESDAY, NOVEMBER 16, 1983

House of Representatives,
Subcommittee on Postsecondary Education,
Committee on Education and Labor,
Washington, D.C.

The subcommittee met, pursuant to call, at 9:30 a.m., in room 2261, Rayburn House Office Building, Hon. Paul Simon (chairman of the subcommittee) presiding.

Members present: Representatives Simon, Petri, Packard, Coleman, Gunderson, and Penny.

Staff present: William A. Blakey, staff director and counsel; Maryln McAdam, legislative assistant; and John Dean, Republican assistant counsel.

Mr. Simon. The Subcommittee on Postsecondary Education is continuing its hearings on reauthorization of the Higher Education Act of 1965.

Our hearings today focus on the question of the Federal role in assisting colleges and universities in providing graduate education. The issues before the subcommittee are clear but difficult. In times of budgetary restraint, what is the appropriate balance between undergraduate and graduate assistance? Should more Federal funds be committed to graduate student assistance when full access has not been achieved for undergraduate students? Should existing programs be expanded to include graduate students or expanded to include more graduate students, for instance, in the NDSL and the College Work Study?

What reasonable loan balances should be established for graduate and professional school students in view of the rising costs of graduate law and medical education and the overwhelming debt burdens being assumed by so many graduate and professional school students? What impact have the Federal Government's efforts to expand access of minorities and women to graduate and professional education had over the past 5 years and what can be done to improve those efforts?

Well, these are among the questions. And then, simply, the whole question, are we really making graduate education available to people who ought to be taking advantage of it, and also the whole question that's been addressed, are we segregating graduate education by economics? If I can use an illustration I have used before: My daughter is now a student at Georgetown Law School, with a tuition of $8,200 a year. How can a family of very limited means take advantage of that, and is it healthy in a society if we exclude people of limited means from many of our schools?

Anyway, these are the questions we want to take a look at. Before we introduce our panel, let me call on my colleague, Tom Coleman.

Mr. **Coleman**. No comments.

Mr. **Simon**. Tim Penny, do you wish to add anything before we begin?

Mr. **Penny**. Thank you, no.

Mr. **Simon**. The first panel includes Terry Hartle of the Educational Testing Service, Dr. Anne Pruitt of Ohio State University, and Dr. Louis Sullivan, president and dean of the Morehouse Medical College in Atlanta. The three of you can come on up.

[Prepared statement of Terry Hartle follows:]

Prepared Statement of Terry W. Hartle, Research Scientist, Educational Testing Service

My name is Terry Hartle, and I am a research scientist at Educational Testing Service. Accompanying me is Richard Wabnick, an education policy consultant who co-authored the study you have asked us to discuss. We are grateful for the opportunity to appear before this committee.

The educational indebtedness of graduate and professional students is an issue that has concerned policymakers and educators alike for several years. There are widespread fears that postbaccalaureate students are assuming excessive debt to finance their education. Such debt, it is believed, will create an unreasonable burden when students begin to repay the loans. Others worry that large educational debts will force students to pursue financially rewarding occupations, influence marriage or family plans, and affect students' ability to make large consumer purchases.

Congress recognized the importance of this issue in the Higher Education Amendments of 1980 when it instructed the National Commission on Student Financial Assistance to examine educational indebtedness. Our study was undertaken to provide the National Commission with some information on this question. In designing the study we worked closely with Robert G. Snyder of the Commission's staff to assure that our work focused on the issues likely to be of greatest interest to the Commission, the Congress and the Department of Education. The three issues that we concentrated upon were:

The level of educational debt for graduate and professional students; the extent to which student debt encumbers future income; and the effect of repayment options on debt burden.

The issues are easily stated and conceptually the problem is straightforward. Unfortunately, the answers are difficult to obtain. The available information on student borrowing is sketchy and incomplete and given the time and resource contraints that governed the National Commission's work, it was impossible to gather more detailed data. Our approach was designed to assemble as much available information as possible and analyze it thoroughly. However, because we relied only on available data, we were forced to make numerous concessions and assumptions to complete the analysis. In doing so, we sought neither to magnify the extent of student debt nor conceal it. Rather we made relatively conservative assumptions that, it our judgement, provided the Commission with the most accurate picture of educational indebtedness.

More specifically, to investigate student debt levels, we relied on data bases available from the Association of American Medical Colleges (AAMC), the Graduate and Professional Student Financial Aid Service (GAPSFAS), and the National Center for Education statistics (NCES). To determine whether the level of borrowing might create a repayment burden, debt levels were matched with estimated future income for several major fields of study. The income calculations were devised from Census Bureau and National Research Council estimates. None of these sources provide clear, unambiguous information on graduate and professional school debt for all fields of study. However, by reviewing this evidence it was possible to compile a picture of debt levels and debt burden that provides substantial insight into each of the issues.

Debt levels.—We found that the level of student borrowing varied considerably. Students in medicine and law had the highest estimated debt, while students pursuing a master's or Ph.D in the arts and sciences showed, on average, lower indebtedness. More specifically, among students who filed for financial assistance through the Graduate and Professional School Financial Aid Services (GAPSFAS), the estimated median debt for 1983 graduates was: medicine, $24,500; law, $14,700; business, $9,000; arts and sciences Ph.D., $6,800; and arts and sciences masters, $6,000. I hasten to add that GAPSFAS filers are not representative of all graduate and professional students and thus these figures probably overstate the national average. GAPSFAS students are, however, exemplary of those students who have borrowed heavily to finance their education. (Table 1 shows estimated student debt levels from a variety of sources).

Debt burden.—The ability of students to repay their educational loans also varies considerably. At median levels of indebtedness, debt burden (that is, the amount of discretionary income which goes to repaying educational debts) will likely range between 8 and 25 percent of a student's discretionary income.[1] According to these data, law students with median indebtedness and median income would have the greatest debt burden—25.1 percent of discretionary income for a married student in the first year of repayment. By contrast, graduates with master's degrees in engineering are likely to have the lowest repayment burden—7.8 percent of income in the first year. Among other occupational areas, the debt burden is as follows: doctors (20.7 percent); administrators and managers (10.9 percent); and arts and sciences Ph.Ds (7.8 percent). Not surprisingly, given equal monthly repayments, the debt burden is highest in the first years of repayment when income is lowest. Over time, as income rises, debt burden diminishes.

Students who borrow more than average, or students with below average income, will have greater debt burdens. For example, a married medical student who borrows $50,000 and then earns the median income will devote 42 percent of discretionary income to loan repayment when he/she begins to repay the loan. (Assuming a ten year repayment).

Managing Repayment.—As loans become an increasingly important part of financial aid, attention has turned to the question of what constitutes an appropriate and manageable level of educational indebtedness. The term "manageable" debt, of course, means a level of borrowing that can be comfortably repaid during the payback period.

Estimating reasonable debt is a challenging task. One problem is simply conceptional: there is no single guidepost that establishes manageable debt levels. Banks frequently allow individuals to spend up to 15 percent of their after-tax income on consumer loans, but this is generally a yardstick rather than an inflexible rule. Moreover, among researchers who have studied educational loans, the estimates of manageable debt range from a low of three percent of gross income to a high of fifteen percent of after-tax income. A second difficulty in determining tolerable debt is that borrower perceptions will vary. A level of repayment that some students find oppressive may be difficult, but still manageable, to other borrowers.

Despite these problems, we did not find any suggestions in the literature that education loan repayments should exceed 15 percent of after-tax income. According to our data, however, several categories of borrowers will have initial repayments that exceed that benchmark.

If we assume that some borrowers will have unreasonable repayment burdens, how might the problems they face be alleviated? One possible solution is to make flexible repayment terms available. Whether an educational loan is manageable or unmanageable is a function of a variety of factors, including the amount borrowed and income. Other considerations that influence manageability include: the repayment period, the interest rate, and whether equal or graduated repayments are required. By varying these terms, it is often possible to make an unmanageable loan manageable.

Dwight Horch and Herb Flamer of ETS analyzed this issue in a 1982 study supported by the Fund for the Improvement of Postsecondary Education (FIPSE). Among students who responded to their survey, nearly half of arts and sciences Ph.Ds, and over eighty percent of law and medical school graduates had unmanageable debts. However, by extending the repayment period and using graduated installments, virtually all students had manageable debts.

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[1] Discretionary income is defined as residual income after taxes and basic living expenses are deducted from total earings.

Summary and Recommendations.—The evidence gathered in this study does not lend itself to a simple set of conclusions. The data do show that many students borrow money for educational purposes, and that the amount of borrowing and the percentage of students with debt has increased in recent years. The data also suggest that the level of debt burden varies considerably, depending on the field of study and the amount of money borrowed. Students in professional fields are most likely to have high debt levels and high debt burdens.

The problems we encountered in obtaining accurate, consistent, and detailed information about student borrowing suggest that any recommendations must be made cautiously. There are, however, three basic recommendations we would call to your attention. First, some students who borrow heavily to finance their education may encounter substantial repayment burdens. To address this problem, we recommend that students, especailly those with high debt levels, have access to flexible repayment options to help ease financial difficulties. There is a precedent for such options: Health Education Assistance Loans (HEAL) may be repaid over a 10-to-25 year period and, for several years, the Student Loan Marketing Association has had the authority to consolidate educational debts and extend repayment periods for individuals who have borrowed under different programs and at different interest rates and terms. Nothing is more important to assuring manageable student loans than allowing borrowers with large debts to extend repayments. In the same vein, graduated repayments (i.e., lower monthly payments in the first years with gradually increasing charges) may prove very important to help students manage educational debts. This is likely to be especially important in some occupations—such as medicine or law—where students may have high debts and low initial earnings, but have the prospect of substantially increased income over time.

Second, as tuitions continue to climb upward, it is likely that student borrowing will also increase. The available data about student debt should not be regarded as an indication that student borrowing will not become a problem in the future. Thus, we urge that the Congress carefully monitor student borrowing patterns for the foreseeable future.

And finally, the federal government needs to collect and maintain better information about graduate and professional education, especially with regard to student financing. One serious problem in analyzing issues in graduate and professional education is that there are few reliable information sources to draw upon. It is, for example, impossible to get accurate, comparable data on trends in such basic areas as student enrollment and tuition charges.

Informed policymaking demands more accurate and consistent information than is currently available. To address this problem, we suggest that the Congress, the Executive Branch, and the higher education groups work cooperatively to define the information about postbaccalaureate education that should be gathered regularly and determine how it should be obtained. One key element should, of course, be data on graduate and professional education finance.

This concludes our prepared statement. We will be happy to answer any questions you may have.

ESTIMATED MEDIAN CUMULATIVE EDUCATIONAL INDEBTEDNESS OF GRADUATE AND PROFESSIONAL STUDENTS, 1983 GRADUATES

Degree	GAPSFAS data		Other sources	Median debt
	Median debt	Percent with debt [1]		Percent with debt
Baccalaureate			[2] $3,125	35.2
All master's degree			[3] 3,125	23.4
Master's in business	$9,900	90.4	[4] 7,125	(5)
Medicine	24,500	97.5	[6] 20,149	71.2
Law	14,700	96.2		
Arts and sciences, Ph d	7,500	71.0		
Master's in engineering			[7] 6,375	(8)

[1] Percent reporting debt in final year of study

[2] Source NCES, survey of recent college graduates, 1981 Debt levels inflated by 25 percent to approximate 1983 levels.

[3] Source NCES, survey of recent college graduates, 1981 Debt levels inflated by 25 percent to approximate 1983 levels. Debt refers only to debt accumulated while pursuing master's degree

[4] Source NCES, survey of recent college graduates, 1981 Debt calculated by combining median debt of undergraduate business major ($2,400) with median master's degree business debt ($3,300) and inflating by 25 percent to approximate 1983 levels.

[5] Percent cannot be estimated because of calculations required to estimate debt level 32.2 percent of undergraduate business majors report debt, 23.4 percent of master's degree graduates do so

[6] Source: Association of American Medical Colleges, 1982 graduation survey. Debt is for 1942 graduates. Inflating debt by 10 percent would increase estimated total to $22,164.

[7] Source: NCES, survey of recent college graduates, 1981. Debt calculated by combining median debt of undergraduate engineering major ($2,700) with median master's degree engineering debt ($2,400) and inflating by 25 percent to approximate 1983 levels.

[8] Percent cannot be estimated because of calculations required to estimate debt level. 35.4 percent of undergraduate engineering majors reported debt, 19.6 percent of master's degree graduates do so.

ESTIMATED DEBT BURDEN OF GRADUATE AND PROFESSIONAL STUDENTS, BY OCCUPATIONAL FIELD, 1983 GRADUATES

Occupational field	Estimated debt level	Discretionary income in 1st year of repayment [1]	Debt burden [2]
anagers/administrators (MBA)	$7,125	9,967	10.9
Doctors (M.D.)	24,500	[3] 20,330	20.7
Lawyers (J.D.)	17,700	8,935	25.1
Arts and science doctorate (Ph.D)	7,500	[4] 15,378	7.4
Engineers (M.E.)	6,375	12,420	7.8

[1] Discretionary income is total earnings less taxes and basic living expenses. Income data derived from updated 1978 Bureau of the Census current population survey. Taxes estimated from tax foundation data on families with median income. Living expenses estimated from standard maintenance allowance of college scholarship service.

[2] Debt burden is the amount of discretionary income which goes to repaying educational debts. These calculations assume a married student with only 1 wage earner. For all fields, single students with no dependents would have slightly lower debt burdens.

[3] Repayments estimated to begin in 1987 because of deferrals available for medical doctors during residency. Earnings inflated to 1987 levels at a rate of 6 percent annually.

[4] Discretionary income based on National Research Council 1981 Survey of doctorate recipients. 1981 earnings inflated to estimate current year earnings (gross income estimated at $28,665). Estimates appear high relative to other occupational areas. If we lower gross income to $20,000, discretionay earnings will be approximately $10,600. At this level, debt burden will be approximately 11 percent.

STATEMENT OF TERRY W. HARTLE, RESEARCH SCIENTIST, THE WASHINGTON OFFICE OF EDUCATIONAL TESTING SERVICE, ACCOMPANIED BY RICHARD WABNICK, EDUCATIONAL CONSULTANT

Mr. **Simon**. Dr. Hartle, we'll start with you.

Dr. **Hartle**. Thank you very much. My name is Terry Hartle. I am a research scientist at the Washington office of the Educational Testing Service. Accompanying me this morning is Rich Wabnick, an education consultant who coauthored the study that we're here to discuss with you today.

We're both pleased to have the opportunity to be here.

Mr. **Simon**. Incidentally, for all witnesses we will enter your full statements in the record and if you wish to summarize them so we can devote more time to questions, it's probably wise.

Dr. **Hartle**. I will do so.

The educational indebtedness of graduate and professional students is a concern, alike, to educators and policymakers alike. Some fear that students are borrowing excessive amounts of money and will have difficulty repaying the loan. Others worry that students will pursue financially rewarding careers, postpone family plans, and forego consumer purchases because of educational debts.

Congress recognized this issue in 1980 and instructed the National Commission on Student Financial Assistance to investigate the extent of student borrowing. This study was done to provide the Commission with some evidence on this topic. We concentrated on three distinct issues. First, the level of educational debt for graduate and professional students, the extent to which debt repayment encumbers income, and third, the effect of repayment options on debt burden.

The issue that we sought to investigate, that is, the ability of students to repay their school loans by comparing the amount they borrowed with their future incomes, is easily stated and the problem is relatively straightforward conceptually. The answers, however, are very difficult to obtain.

There is no single data source that bears on these questions. We gathered as much data as possible and analyzed it thoroughly with the intention neither to magnify nor conceal the level of student debt. Where necessary, we made very conservative assumptions in an effort to provide the fairest picture of what we felt student indebtedness looked like.

We used data from the Association of American Medical College, the Graduate & Professional Student Financial Aid Service, and the National Center for Education Statistics, to compile the pictures of student borrowing. Income data was obtained from the Census Bureau and the National Research Council.

None of these sources provide a clear, unambiguous information. But taken together, they provide a broad picture and offer substantial insight into the problem.

The first issue we sought to investigate was student debt levels. We found that the level of borrowing varied considerably. Law and medical students had the highest debts with graduate students in the arts and sciences, regardless of whether they were pursuing a Ph.D. or a master's degree, having generally lower debts.

More specifically, among students who filed with the GAPSFAS Financial Aid Service, we estimated 1983 median cumulative debt as follows: Medicine, $24,500; law students, $14,700; business students, approximately $10,000; arts and science Ph.D.'s $6,800; and master's degrees in the arts and sciences about $6,000.

I hasten to add that these figures are not necessarily representative of all graduate students, but we do believe that they are exemplary of those who borrow heavily to finance their education.

The second issue we sought to investigate was debt burden. Debt burden we defined as the percentage of a student's discretionary income that went to loan repayment. Debt burden, like debt levels, varied considerably. At median levels of indebtedness, debt burden ranged from 8 to 25 percent of discretionary income. According to these data, law students had the highest level of debt burden with 25 percent of discretionary income going to repayment in the first year.

For other occupational areas, the debt burdens were approximately as follows: Doctors, 20 percent; administrators, 11 percent; arts and science Ph.D's 8 percent; and those with master's degrees in engineering, 8 percent.

Obviously, students who borrow more or those who have lower incomes will have higher debt burdens. For example, a married medical student with $50,000 in debts will devote about 42 percent of his or her discretionary income in the first year to loan repayment. I might add that according to the Association of American Medical Colleges, approximately 3 percent of all doctors will assume educational loans at that level.

The third topic we sought to examine was managing repayment. There is, as this committee is well aware, a great deal of concern with estimating a level of educational borrower that is manageable, that is, a level of loans which can be comfortably repaid in the payback period.

Estimating manageable educational debts is challenging for two reasons. First, there is no single guidepost of what is manageable and what is not. Banks generally use 15 percent of aftertax income as a yardstick but this is not an inflexible rule. Researchers who have studied educational loans also do not agree about what constitutes an appropriate and manageable level of educational borrowing.

The second problem that confounds estimating manageable debt is that borrower perceptions will vary considerably. A level of debt that one borrower might find oppressive may be difficult but still manageable to another student.

Nonetheless, we found no suggestions in our research that loan repayment should exceed 15 percent of aftertax income, but we did find several categories of borrowers who had accumulated educational debts above that level. Thus, if we assume that some graduate and professional students will have unmanageable debts, how might their problems be alleviated?

One solution is making flexible repayment terms available. By varying terms such as the length of the payback period and the nature of installments, it is often possible to make an unmanageable loan manageable.

Herb Flamer and Dwight Horch, my colleagues at Educational Testing Service, studied this issue in 1982. Many students in their survey had debts that Flamer and Horch calculated as unmanageable. But by varying the length of the repayment period and using graduated repayments instead of fixed repayments, virtually all students had manageable debts.

In summary, the data that we compiled shows, first, that many students borrow to finance graduate and professional education. Second, the amount of borrowing has increased in recent years, as has the percentage of students with debts.

Third, the level of debt and debt burden vary considerably by field of study. Students in professional fields are most likely to have high debts and high debt burdens. Given the problem that we obtained, we mentioned earlier in obtaining data, drawing conclusions and recommendations from this evidence must be done cautiously. With this in mind, there are three points we would call to your attention.

First, graduate and professional students, especially those with high debt levels, should have access to flexible repayment options. Nothing is more important to manageable educational debts than allowing students to extend repayments. Graduated repayment schedules are also important in this same vein, especially for those with high debts, low initial earnings, but prospects for substantially higher income. Obviously, law and medical students would be a case in point here.

The second point we would make is that the best possible interpretation to put on the evidence we gather is that despite high borrowing by some students, many graduate and professional students will be able to manage repayments, especially if flexible repayment schedules are available.

This should not be taken as a sign that all is well, for tuitions are increasing rapidly and we suspect so are student borrowing levels. Thus, we would suggest that the Congress and executive branch continue to monitor student borrowing patterns to assure that educational indebtedness does not become a more serious problem than it is already.

Third point we would suggest is that the difficulties we encountered in obtaining data are not surprising given the paucity of information the Federal Government collects on graduate and professional education. We believe that the Federal Government needs to improve its data collection on postbaccalaureate education, especially with regard to enrollment patterns and finance.

We urge the Congress, the executive branch, and interested groups to work together to define precisely what information should be collected and to determine how it should be gathered.

That concludes our prepared statement. We will be happy to answer any questions.

Mr. SIMON. Thank you very much. Dr. Pruitt, the associate dean at Ohio State University.

[Prepared statement of Dr. Anne Pruitt follows:]

PREPARED STATEMENT OF DR. ANNE S. PRUITT, ASSOCIATE DEAN, GRADUATE SCHOOL, THE OHIO STATE UNIVERSITY, COLUMBUS, OHIO

Mr. Chairman and Members of the Subcommittee:

My name is Anne S. Pruitt, and I am Associate Dean of the Graduate School at The Ohio State University. I am appearing today on behalf The Ohio State University and the other institutions of higher education that are currently administering fellowships under the Graduate and Professional Fellowship Study Grant Program of Title IX of the Higher Education Act of 1965, as amended. I appreciate this opportunity to report on our experience with this program which is now in its sixth year of operation. At Ohio State I have responsibility for all of the graduate fellowship programs and I direct one of the eight G*POP Regional Resource Centers. I have, therefore, had the opportunity to become familiar with G*POP from both a campus and national perspective.

The program, formerly known as the Graduate and Professional Opportunity Program (G*POP), supports activities that increase access and promote completion of graduate and professional degrees by minorities and women, two groups that traditionally have been underrepresented in graduate and professional degree programs. The program authorizes grants to institutions of higher education to strengthen, improve, and expand the quality of graduate and professional programs leading to an advanced degree. Since 1980 all of the program support has gone to fellowships; no funds have been appropriated for recruitment and other support activities.

I want to tell you some things I know about this program and why I believe it deserves Congressional support for its continuation and expansion. It is estimated that sixty percent of the nation's brainpower consists of minorities and women. Yet their underrepresentation among doctorate recipients in high demandfields is acute. To illustrate, let me provide some information about doctorate degrees conferred in the United States. In 1982 31,048 Ph.D.'s were awarded by all U. S. institutions. Less than one-third went to women (32%). Blacks who were U. S. citizens earned three percent of these degrees. Hispanics including Mexican Americans and Puerto Ricans earned 1.7%. Native Americans earned two tenths of one percent. Asian Americans each earned 1.4% of Ph.D.'s. Seventeen percent of all doctoral degrees were earned by non-U.S. citizens studying in this country on temporary visas or seeking U.S. residnence. For the second year in a row the proportion of doctorate recipients in a broad field--engineering--reporting foreign citizenship (50 percent) exceeded the proportion reporting U.S. citizenship (44 percent). This is not a record of equal access and opportunity. It represents some progress over previous years. Overall in 1982 only 6.7% of earned doctorates went to U. S. citizen members of minority groups.

This summary information, reported annually by National Research Council and published by the national Academy of Sciences, is the strongest argument for the existence of the G*POP program and why its usefulness to the nation is only just beginning to be felt.

Only two federal agencies award graduate fellowships that are targeted for minorities. NSF, under its minority graduate fellowships program, awarded 159 fellowships in 1982, and the Department of Education awarded approximately 1022 G*POP Fellowships. The latter, G*POP, represents the only federal commitment to graduate education for both minorities and women. A total, then of 1181 fellowships reflects a small federal commitment to this group that has been disenfranchised for years and is still gravely underrepresented in the advanced levels of the U.S. workforce.

The G*POP program has responded significantly to the matter of access and, as a consequence, to the labor force needs of our nation. Let's look at some specific information:

STUDENTS SERVED From Fiscal year 1983 funds, 128 grants totaling almost $10,000,000 have been made to colleges and universities to support 700 students in their second or third year of full-time graduate or professional study, and to support another 500 new students beginning their first year of study during 1983-84.

Based on five years of program experience, it is expected that the composition of these fellows by sex and race will be similar to the fiscal year 1982 totals:

Ethnic Group	% of Total
Blacks	54.1
Hispanic	19.2
Asian Americans	5.4
Native Americans	3.0
Majority Women	18.3
	100.0

Women overall, however, comprised more than 50% of the 1022 fellows supported at 115 institutions during 1982 and 1983.

PROGRAM SCOPE: It is projected that the fellows will study in academic and professional areas in roughly the same proportions as has been the previous experience.

	1982-1983 % of Total
Physical Science	18.1
Engineering	17.8
Life Science	16.3
Social Science	16.2
Psychology	6.3
Humanities	1.4
Professions:	
Law	15.8
Business	6.6
Education	1.5
	100.0

TYPES OF BENEFITS PROVIDED: Stipends of up to $4500 are awarded to students each year for full-time study based on a determination of financial need. In addition, the institution receives $3900 for each student paid *in lieu* of tuition and fees. As long as the institution does not directly charge the student any tuition or fees, it is free to use this $3900 allowance at its own discretion.

PROGRAMS EFFECTIVENESS: Final reports received during the fall of 1982 indicate that 55 students were awarded Ph.D.s, 174 students masters degrees, and 66 students received the first professional degree in law. These degrees were earned in the following areas:

	Ph.D.s	Masters
Life Science	20	19
Physical Science	13	38
Engineering/Comp. Sc.	9	58
Social Science	5	18
Education	8	
Business Administration	----	41
	55	174

Institutional projections indicate that another 83 students were to have been awarded the Ph.D. during the spring and summer of 1983. This means the total of Ph.D.s supported by G*POP now approaches 138. Since the median time lapse between the award of the BA degree and receipt of the Ph.D. for all students in 9.6 years, 138 Ph.D.s awarded in six years of program operation is significant, and the totals are bound to increase as more students awarded G*POP fellowships complete their degree programs. Since the program is now in its sixth year, it is expected that there will be an increased number of fellows graduating in the future.

G*POP PARTICIPANTS SINCE 1978

Fiscal Year 1978	New and Continuing Awards	340
Fiscal Year 1979	New and Continuing Awards	874
Fiscal Year 1980	New and Continuing Awards	1007
Fiscal Year 1981	New and Continuing Awards	1044
Fiscal Year 1982	New and Continuing Awards	989
Fiscal Year 1983	New and Continuing Awards	1015
Total Participants FY 1978-83 (includes awards continued to a current maximum of three years)		5269

The race, sex, and ethnicity of G*POP participants are somewhat more difficult to summarize. Here is some summary data, and I will include for the recond such summaries as have been prepared by the Department of Education.

SUMMARY OF G*POP

FELLOWSHIPS AWARDED BY ETHNIC GROUP PERCENTAGE

Fiscal Year	Blacks	Hispanics	Native American	Asian American	Majority Women
1978	46	16	4	8	26
1979	53	14	4	5	24
1980	52	19	3	5	22
1981	50	20	4	5	21
1982	54	19	3	5	18

Although G*POP is small and it has been in existence only six years, it is beginning to accomplish its goals as set out by the Congress. Most encouraging is the profile of G*POP Fellows who have completed degrees.

One student was honored with the prestigious National Book Award for a novel she wrote. (See Washington Post 10/21/83 pg. D-1).

Another fellowship graduate has been appointed Assistant Attorney General for the State of Ohio.

A third student, a fellow in biomedical Engineering, ahs developed a method using light to measure the movement of muscles in an amputee's upper leg. By determining the angle of the knee, the artificial leg can be adjusted to match the remaining limb, reducing the time it takes to learn to walk from an average of six months to as little as twenty minutes.

Information to date shows that 53 students received the Ph.D. degree in 1982 with G*POP support. They studied in a variety of fields, including Physics, Pharamacology, Statistics, Anatomy, Physiology, Law, Mathematics and Veterinary Anatomy. Twelve of the 53 students hold faculty positions in such institutions as Michigan State University of North Carolina, University of Utah, and one person is head of the Computer and Information Science Department at Tuskegee Institute. Seven recipients hold research and other positions in private industry, including Hewlett-Packard, Bell Labs, and Meade-Johnston. In addition, 238 Masters Degrees have been awarded. Of these, 52 are in engineering, and they are employed at such places as White Sands Missile Range, the Government of Puerto Rico, Westinghouse, and one is a faculty member at the University of New Mexico. Moreover, there were 41 MBAs; two are with IBM, several are at Jackson State University, one at Honeywell, and one at Mellon Bank. There are 38 persons with Masters in the Physical Sciences. They have positions with Texas Instruments, Dow Chemical, and the Oklahoma Geological Survey. Of the nineteen in Life Sciences, one is a faculty member at the University of Texas. One is at Redstone Arsenal. Finally, there were 64 persons who have received the J.D. degree. Only one failed the Bar on the first try. Some are assistant D.A.'s, others are in private firms, one is the first black female member of the University of Kentucky Law Journal, others are in public defender type work, and still others are in various federal agencies.

G*POP is an important federal investment in the belief that our nation is best served by enabling all of its people to achieve educational levels that can serve the needs of society. if we wish to implement this belief, we will need to continue programs such as G*POP. The contention of the Administration that this can be done through the largesse of post-secondary institutions, private foundations and private business enterprises alone is not borne out by our experience. Those institutions will respond, but the burden of support for all students is so great that they cannot budget the extra support needed for women and minorities. Therefore, significant gains made by G*POP over the past five years will be imperiled.

The G*POP Program is important both symbolically and as categorical support for some 1200 current students. Over 5,000 graduate students have received benefits through this program. It is by no means perfect, but it is vitally important for those of us dedicated to a better future for the next generation. G*POP is in fact underfunded for present levels of graduate students support. At Ohio State, for example, the current fellowship stipend level is $7,200 for 12 months compared to G*POP level of $4,500. The Graduate School supplements each G*POP stipend by 2,700 in order to raise it to our minimum. In addition, a few departments such as Chemistry and Mathematics supplement even more in order to make G*POP Fellowships comparable to others in their disciplines.

Cost of instruction allowances for G*POP Fellows are also now out of step with existing tuition and fee levels. At OSU current costs for out of state students are $6,440 annually. G*POP allows $3,900 per student for these costs. Thus again OSU supplements each G*POP Fellow by $2,540 dollars each during the academic year. As you can see, without the additional support provided by Ohio State each G*POP Fellow would be underfunded by $5,240 annually. These numbers would be lower if the student were an Ohio resident, but the point remains. (Graduate students are much more likely than undergraduates to be from out of state). This situation is undoubtly repeated at other institutions.

Unmet need for G*POP Fellowships is a more difficult problem to address. At OSU we use a scale to rate all fellowship applicants. All applicants that reach a certain ranking are eligible for fellowship. This year we could not find funding for 43 students who met our criteria. Of these 43, 8 were in fields where the G*POP program could be used. If 128 institutions participate in the program, not all as large as OSU, this would suggest a need for approximately 250 new G*POP Fellowships to meet existing unmet needs. The program would have to grow by 20% to meet this projected need.

Improvements in G*POP to bring the stipend level and cost of instruction allowance more in line with current costs would be very welcome as reauthorization is considered. Authorization for a fourth year of study is also needed as is the restoriation of authorization and appropriations for Part A programs for recruitment and other services. Our first priority remains, however, the continuation of the program. We are grateful for the support we have received over the years from the House Education and Labor Committee and in particular this subcommittee.

As Daniel Webster observed..."on the diffusion of education among the people rests the preservation and perpetuation of our free institutions." G*POP is a small but very important instrument in the 115 institutions that are using G*POP to accomplish a goal we all share with Mr. Webster.

Thank you very much for this opportunity to present our views. My statement for the record does have more detailed tables that present specific breakdown by academic discipline of G*POP Fellows that did not permit easy summary in the time permitted me. I would be happy to answer any of your questions.

U.S. Office of Education
G* Y 1978 Fellows

[redacted]

G*POP SUMMARIES
Fiscal Year 1978

Academic Area	Black				White				Nat. Amer.				Asian Amer.				Hispanic			
	M	W	(T)	%	M	W	(T)	%	M	W	(T)	%	M	W	(T)	%	M	W	(T)	%
Engineering (57) 17	17	8	25	44	0	19	19	34	1	0	1	1	3	3	6	10	6	0	6	10
Med/Health Sci.(32) 10	6	11	17	54	1	4	5	15	0	1	1	3	1	3	4	13	1	4	5	15
Math/Physics/Comp. Sci(40) 12	7	7	14	36	0	20	20	50	0	1	1	2	2	1	3	7	1	1	2	5
Poli Sci/History(14) 4	5	3	8	58	0	2	2	14	0	0	0	-	1	0	1	7	1	2	3	21
Law (31) 9	12	7	19	62	0	1	1	3	0	1	1	3	1	0	1	3	7	2	9	29
Bus./Mgmt/acc't (23) 7	6	7	13	56	0	5	5	22	2	3	5	22	0	0	0	-	0	0	0	-
Architect/City Plan.(9) 1	6	2	8	89	0	1	1	11	0	0	0	-	0	0	0	-	0	0	0	-
Psychology (20) 6	5	4	9	45	0	3	3	15	0	0	0	-	0	0	0	-	4	4	8	40
Biological Science (24) 7	6	7	13	55	0	2	2	8	0	1	1	4	2	0	2	8	6	0	6	25
Chemistry (18) 5	4	4	8	45	0	6	6	33	0	0	0	-	0	2	2	11	1	1	2	11
Economics (10) 2	2	3	5	50	0	3	3	30	0	0	0	-	0	0	0	-	2	0	2	20
Earth Science(23) 6	6	1	7	30	0	10	10	44	0	0	0	-	3	1	4	17	2	0	2	9
Education (12) 3	0	0	0	-	0	4	4	33	1	3	4	33	2	1	3	25	1	0	1	8
Anthro/Sociology (11) 3	3	1	4	36	0	0	0	-	0	0	0	-	0	0	0	-	4	3	7	64
Animal/ Vet Sci (4) 1	2	1	3	75	0	0	0	-	0	0	0	-	0	0	0	-	1	0	1	25
Fine Arts (3) 1	0	0	0	-	0	2	2	67	0	0	0	-	0	1	1	33	0	0	0	-
Forestry (1) -	0	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-	1	0	1	100
Speech & Hearing (5) 1	0	1	1	20	0	3	3	60	0	0	0	-	0	0	0	-	0	1	1	20
Sports Admin (3) 1	2	0	2	67	0	1	1	33	0	0	0	-	0	0	0	-	0	0	0	--
TOTAL	89	67	156		1	86	87		4	10	14		15	12	27		38	18	56	
GRAND TOTAL																				340
Percent of Total	57	43			1	99			28	72			55	45			67	33		
Percent of Grant Total			46				26				4				8				16	

Code: i.e., From a total of 340 fellowships, 57 (17%) were awarded in Engineering.
Of the total awarded in Engineering: 44% were to Blacks
34% were to Whites
1% were to Native Americans
10% were to Asian Americans
10% were to Hispanics

Of the 156 fellowships awarded to Blacks: 57% were to Black Males
43% were to Black Females

Of the total number of fellowships (340) awarded: 46% were to Blacks
26% were to Whites
4% were to Native Americans
8% were to Asian Americans
16% were to Hispanics

7/3/79

G*POP FELLOWS 1978 and 1979-80

(Total number of fellows currently in G*POP = 874)
Continuing = 303; New starts 9-1-79 = 571

CUMULATIVE TOTAL, BY SEX AND ETHNICITY

	FEMALE					MALE							GRAND
	Black	White	Hisp.	A.A.	N.A.	Black	White	Hisp.	A.A.	N.A.	TOTAL USED	UNUSED	TOTAL
ont)# Fellows 1978-79	61	79	14	9	9	81	0	36	12	2	303	0	303
ew) # Fellows 1979-80	147	131	29	11	10	168	0	45	15	10	566	5	571
											869	+ 5	= 874
TOTAL (C & N)	208	210	43	20	19	249	0	81	27	12			
ont)% of Total 1978-79	20.1	26.2	4.6	2.9	2.9	26.8	0	11.9	3.9	.6	100%		
) % of Total 1979-80	25.9	23.3	5.1	1.9	1.8	29.7	0	7.9	2.6	1.8	100%		
% of TOTAL (C & N)	23.9	24.3	5.0	2.3	2.2	28.6	0	9.3	3.1	1.3	100%		

TOTAL BY SEX

	FEMALE	MALE
ont) # Fellows 1978-79	172	131
ew) # Fellows 1979-80	328	238
TOTAL (C & N)	500	369
nt) % of Total 1978-79	56.7	43.3
w) % of Total 1979-80	58.0	42.0
% of Total (C & N)	57.7	42.3

TOTAL BY ETHNICITY

	Black	White	Hisp.	A.A.	N.A.
(Cont) # Fellows 1978-79	142	79	50	21	11
(New) # Fellows 1979-80	314	131	74	26	20
TOTAL (C & N)	457	210	124	47	31
(Cont) % of Total 1978-79	46.8	26.1	16.5	6.9	3.6
(New) % of Total 1979-80	55.5	23.3	13.1	4.6	3.5
% of Total (C & N)	52.6	24.1	14.3	5.4	3.6

Date: November 1, 1979

G*POP Fellows 197- 79, 1979-80 and 1980-81
(Total Number of Fel Currently in G*POP = 1007)
Continuati = 771; New = 236

Cumulative Total By Sex and Ethnicity

	FEMALE						MALE					
	B	W	H	AA	NA	TOTAL	B	H	AA	NA	TOTAL	GRAND TOT
ew Fellows	63	38	14	3	3	121	63	37	7	8	115	236
ercent of Total (236)	26.7	16.1	5.9	1.3	1.3	51.3%	26.7	15.7	2.9	3.4	48.7%	100%
ontinuation Fellows	181	180	42	15	9	427	212	95	30	7	344	771
ercent of Total (771)	23.4	23.3	5.4	2.0	1.1	55.2%	27.5	12.3	3.9	1.0	44.7%	100%
otal By Sex	244	218	56	18	12	548	275	132	37	15	459	1007
ercent of Total By Sex	44.5	39.7	10.2	3.3	2.2	100%	59.9	28.7	8.1	3.3	100%	
ercent of Grand TOTAL (1007)	24.2	21.6	5.6	1.8	1.2	54.4	27.3	13.1	3.7	1.5	45.6	100%

TOTAL BY SEX

	Female	Male
New 1980-81	121	115
Percent of Total	51.3	48.7
Continuations	427	344
Percent of Total	55.2	44.7
Grand Total	548	459
Percent of Grand Total	54.4	45.6

TOTAL BY ETHNICITY

	Black	White	Hispanic	Asian Amer.	Native Amer.	Gran Tota
New	126	38	51	10	11	236
Percent of Total	53.3	16.1	21.6	4.2	4.6	100%
Continuations	393	180	137	45	16	773
Percent of Total	50.9	23.3	17.7	5.8	2.1	100%
Grand Total	519	218	188	55	27	1007
Percent of Grand Total	51.5	21.6	18.6	5.4	2.6	100%

January 21, 1981

G*POP SUMMARIES
Fiscal Year 1980 details

DEPARTMENT OF EDUC
GRADUATE AND PROFESSIONAL OPPORTUNI [illegible] PROGRAM (G*POP)
G*POP FY 78-79 and FY 79-80 Continuation Fellows and 1980 New Fellows
By discipline and ethnic group

Academic Area	Awards per Discipline	% of total awards	Black				White			Hispanic				Native American				Asian American			
			M	W	T	%	W	T	%*	M	W	T	%*	M	W	T	%*	M	W	T	%*
Engineering	199	20	55	33	88	44	56	56	28	31	8	39	20	2	1	3	2	11	2	13	7
Medical Science	73	7	17	21	38	52	11	11	15	9	4	13	18	1	5	6	14	3	2	5	7
Math/Comp.Sci.	45	4	14	7	21	47	17	17	38	3	0	3	7	0	0	0	0	3	1	4	9
Poli.Sci./History	35	3	12	12	24	69	2	2	6	4	3	7	16	1	0	1	2	1	0	1	2
Law	119	12	45	40	85	71	2	[illegible]	2	16	9	25	21	3	1	4	3	1	2	3	3
Business Admin./Mgmt./Acc't	59	6	18	20	38	64	14	14	24	5	0	5	8	1	0	1	2	0	1	1	2
Architect/City Plan.	35	3	15	10	25	71	4	4	11	6	0	6	17	0	0	0	0	0	0	0	0
Psychology	50	5	14	18	32	64	6	6	12	3	7	10	20	0	0	0	0	1	1	2	4
Biological Sci.	66	7	10	22	32	48	12	12	18	9	5	14	21	1	0	1	2	3	4	7	11
Chemistry	74	7	14	11	25	34	30	30	41	9	5	14	19	1	0	1	1	4	0	4	5
Economics	27	3	11	5	16	59	4	4	15	4	2	6	22	0	0	0	0	0	1	1	4
Earth Sci./Env./Marine	48	5	4	1	5	10	26	26	54	9	0	9	19	0	2	2	4	5	1	6	13
Education	25	2	7	2	9	36	2	2	8	2	3	5	20	4	1	5	20	2	2	4	16
Anthro/Soc.	30	3	7	8	15	50	4	4	13	7	4	11	36	0	0	0	0	0	0	0	0
Agricultural Science	44	4	14	12	26	59	10	10	23	5	1	6	14	0	0	0	0	1	1	2	5
Mass Media/Communications	5	.5	1	1	2	40	2	2	40	0	0	0	0	0	0	0	0	1	0	1	20
Speech & Hearing	23	2	1	12	13	57	4	4	17	0	4	4	17	0	2	2	9	0	0	0	0
Physics	21	2	9	1	10	48	6	6	29	5	0	5	24	0	0	0	0	0	0	0	0
English	3	.3	2	0	2	67	0	0	0	1	0	1	33	0	0	0	0	0	0	0	0
Criminal Justice	17	2	3	4	7	41	5	5	29	4	0	4	24	0	0	0	[illegible]	1	0	1	6
Journalism	3	.3	0	2	2	67	1	1	33	0	0	0	0	0	0	0	0	0	[illegible]	0	0
M.S.W.	6	.6	2	2	4	67	0	0	0	0	1	1	17	1	0	1	17	0	0	0	0
TOTALS	1007	100%	275	244	519		218	218		132	56	188		15	12	27		[illegible]	18	55	
Percent of Ethnic Total			53	47			100			61	39			56	44			67	33		
GRAND TOTAL	1007																				
Percent of Grand Total			27	24		51	22		22	13	6		19	2	1		3	3	2		5

* Percent of awards per discipline by ethnic group

January 22, 1981

3/2/82

G*POP SUMMARIES
Fiscal Year 1981

G*POP

Fellowships in Academic/Professional Areas

FY 1981

	Total/%	B	H	NA	AA	MW
Engineering	178 (16%)	65 (37%)	41 (24%)	1 (.5%)	9 (5%)	62 (35%)
Physical Sciences	219 (20%)	82 (37%)	37 (17%)	3 (.1%)	14 (6%)	83 (37%)
Life Sciences	157 (14%)	65 (41%)	31 (20%)	8 (5%)	16 (10%)	37 (24%)
Social Sciences	136 (12%)	72 (53%)	33 (24%)	10 (7%)	2 (1%)	19 (14%)
Humanities/Fine Arts	19 (2%)	13 (68%)	3 (16%)	2 (11%)	0	1 (5%)
Psychology	67 (6%)	45 (67%)	13 (19%)	2 (3%)	3 (4%)	4 (6%)
Professions						
Law	177 (16%)	121 (68%)	42 (24%)	6 (3%)	4 (2%)	4 (2%)
Business	64 (6%)	42 (66%)	2 (3%)	3 (5%)	2 (3%)	15 (24%)
Education	27 (2%)	15 (55%)	6 (22%)	6 (22%)	0	0
	1,044					

	% of Total
B-Blacks	50%
H-Hispanics	20%
NA-Native Americans	4%
AA-Asian Americans	5%
MW-Majority Women	21%
	100%

G*POP
Fellowships in Academic/Professional Area
FY 1982

Academic Year 1982-83

	Total and %	B	H	NA	AA	MW
Engineering	176 17.8%	77	23	2	13	61
Physical Sciences	179 18.1%	75	37	0	10	57
Life Sciences	161 16.3%	88	29	5	15	24
Social Sciences	160 16.2%	95	31	7	5	22
Humanities/Fine Arts	14 1.4%	6	3	2	2	1
Psychology	62 6.3%	42	10	0	2	8
Professions:						
Law	156 15.8%	100	45	6	4	1
Business	66 6.6%	50	6	1	2	7
Education	15 1.5%	2	6	7	0	0
	989	535	190	30	53	181

	% of Total
B - Black	54.1
H - Hispanics	19.2
NA - Native Americans	3.0
AA - Asian Americans	5.4
MW - Majority Women	18.3
	100.0

GPOP SUMMARIES
Fiscal Year 1983

G*POP
FELLOWSHIPS IN ACADEMIC/PROFESSIONAL AREA
FY 1983

ACADEMIC YEAR 1983-84

	Total and %	B	H	NA	AA	MW
Engineering	107 (13%)	41	13	2	6	45
Physical Sciences	156 (19%)	65	30	2	11	48
Life Sciences	211 (25%)	100	37	11	12	51
Social Sciences	80 (10%)	41	20	2	2	15
Humanities/Fine Arts	18 (02%)	15	0	2	0	1
Psychology	79 (09%)	47	20	0	5	7
Professions:						
Law	144 (17%)	89	44	6	5	0
Business	31 (04%)	20	5	2	1	3
Education	11 (01%)	6	4	1	0	0
	837	424	173	28	42	170

	% of Total
B - Black	51
H - Hispanics	21
NA - Native Americans	03
AA - Asian Americans	05
MW - Majority Women	20
	100

The Washington Post STYLE 10/21/83 The Arts/Television/Classified D1

The Painful Salvation Of Gloria Naylor

The 'Brewster Place' Author and Her Healing Words

[illegible]

[illegible]

Naylor

NAYLOR, From D1

ress—the vivid occupants of her book—live on a poor dead-end street, physical captives of its wall but free to laugh, quarrel and destroy beyond its bounds. Everyone knows a street like this. Bryant Street NE bumps into a wall. So where is it? She laughs deeply. "It is purposely nowhere. I wanted to create a metaphysical situation. The women shared racism and sexism; to put it somewhere would have introduced connections I didn't want."

The characters share portions of Naylor's 33 years of emotional barriers, some self-pitying, some defiant, some dreamy. "People . . . are being laudatory when they say, 'Oh my God, the way you can write about pain.' You sort of want to tell them, 'No, baby, I was feeling that pain.' I would love to take credit for being a genius, but no, I was letting out what was in a form I could deal with, another woman's life."

"Then she opened her eyes and they screamed and screamed into the face above hers—the face that was pushing this tearing pain inside of her body. The screams tried to break through her corneas out into the air, but the tough rubbery flesh sent them rebounding back into her brain, first shaking lifeless the cells that nurtured her memory."

When she started writing, Naylor was putting back her own broken pieces. She grew up in New York, a deliberate circumstance. Her mother, who was barred from the public libraries in her childhood Mississippi, saved money from her field work so she could send for books, and promised herself her children would be born in the North. Naylor's mother is a telephone operator and her father a motorman for New York Transit and she has two younger sisters, one a nurse, the other a homemaker.

The daughter-to-be-the-writer sat in classes for gifted children in public schools and read Brontës, Dickens, Faulkner and Hemingway. She cried over the passion of "Jane Eyre" and didn't cry over a book again until "Native Son."

When Naylor was a high school senior, the Rev. Martin Luther King Jr. was assassinated and she sought order to her own confusion. For the next seven years, she was a Jehovah's Witness missionary, traveling through New York, North Carolina and Florida. "I wanted a solution to the chaos. Many of my peers joined the hippie movements or became black nationalists. This way seemed right," she says. When she was 25, she quit because she found the life, especially the celibacy, confining. "I began to feel ill at ease."

In the next seven-year phase, Naylor made up for what she now considers lost time. Nursing was a brief option. She replaced pessimism with skepticism. Even of love. Ten days was all she could give to a marriage.

When her luck changed she was in her mid-20s, attending Brooklyn College, working at a hotel switchboard at night and having her reading world opened by Joan Larkin, a professor. On her first try, Naylor had a story published by Essence Magazine in 1980. Then, ironically, given her past disappointments, she didn't hesitate when a friend who knew a friend who was a secretary to the president at Viking said she would show her short stories around. "To us that was close enough," she says of her fearless naivete. The secretary circulated four short stories in January 1981. Two weeks later Naylor had a contract and the secretary a promotion to editor. "Now, looking back, it's like, 'How did that happen?' That just does not happen," she says.

It was that crossroads when her optimism finally bumped her despair. "Maybe it was because I had so much bad luck. Maybe it was just the time. I believe that if we walk across the street, it can change the whole direction of our life, truly." The relief helped her to write: *"Butch had a laugh like the edges of an April sunset—translucent and mystifying. You knew it couldn't last forever, but you'd stand for hours, hoping for the chance to experience just a glimmer of it once again."*

The writing of the next four stories and a prologue that emerged as a book, however, was another low time. "I went through the frozen stage for a time. Then, as always, I did what I had to do," she says. Disappointment is now determination, sometimes it's too much of a whirl. "It's dislocation. You get sort of dizzy, thinking about how my life has changed," she says. After Brooklyn, she earned a master's degree in Afro-American studies at Yale University.

Until the spring, when she finishes teaching at GW, she has an apartment on 16th Street. She rises at dawn to face a December deadline for her second book, "Linden Hills," and keeps working at that powerful spareness that gives "Brewster" its edge.

Mattie Michael knows she has lost a son: *"She walked up the street and saw that his car wasn't parked out front and the house was dark . . . Normally she would have gone through the front door, taken off her coat, and hung it in the front hall closet . . . She took off her coat and laid it on one of the kitchen chairs. There was an extra jacket of his in the front hall closet that would not be there."*

Naylor in her George Washington University office, by Douglas Chevalier

STATEMENT OF DR. ANNE PRUITT, ASSOCIATE DEAN, OHIO STATE UNIVERSITY

Dr. PRUITT. Mr. Chairman and members of the subcommittee, thank you for the opportunity to testify at hearings leading to the reauthorization of the Higher Education Act of 1965.

I am Anne Smith Pruitt and an associate dean of the graduate school at Ohio State. I am appearing today on behalf of the university and other universities of higher—other institutions of higher education that are currently administering fellowships under the graduate and professional fellowship study grant program of title 9 of the Higher Education Act of 1965, as amended.

I appreciate the opportunity to report on our experience with this program. For 5 years these institutions have undertaken programs formerly known as G*POP that were designed to support activities to increase access and promote completion of graduate and professional degrees by minorities and women, two groups that traditionally have been under-representated in graduate and professional schools.

I'd like to provide a factual overview of the program, since its inception in 1978. But first I want to tell you about the students who are currently enrolled. From fiscal year 1983 funds 128 grants, totally almost $10 million, have been made to colleges and universities to support 700 students in their second or third year of full-time graduate or professional study, and to support another 500 new students beginning their first year studies this year. That's a total of 1,200 students.

Based on 5 years of program experience, it is expected that the composition of these fellows in 1983–84 by sex and race will be similar to the fiscal year 1982 totals. Blacks, for example, constitute 54.1 percent; Hispanics, 19.2 percent; Asian-Americans, 5.4; native Americans, 3 percent; and majority women, 18.3 percent.

Turning to program scope, it is projected that the fellows will study in academic and professional areas in roughly the same proportions as has been the previous experience.

For 1982–83 the percentages are as follows: In the physical sciences, 18.1 percent were enrolled. In engineering, 17.8. In the life sciences, 16.3. In the social sciences, 16.2. In law, 15.8. And the remainder in psychology, humanities, business, and education.

Turning to program effectiveness, final reports for the previous year are not due in the Department of Education until November 30. Therefore, I'm giving you information derived from the 1982 reports. Final reports during the fall of 1982 indicate that 55 students had been awarded Ph.D. degrees, 174 the master's degree, 66 received the first professional degree in law, and they were broken down as follows: Ph.D. degrees were awarded to 20 fellows in the life sciences, 13 in the physical sciences, 9 in engineering and computer science.

As far as master's degrees are concerned, the largest number went to students enrolled in engineering and computer science. That's 52. There were 38 in the physical sciences, 19 in the life sciences, and 41 in business administration.

Institutional projections indicate that another 83 students were to have been awarded the Ph.D. degree during the spring and summer of 1983. This means the total of Ph.D's completed under G*POP now approaches 138.

Since the median time lapse between the award of the bachelor's degree and receipt of the doctorate, for all students, is 9.6 years, 138 Ph.D's awarded in 6 years of program operation is significant. And the totals are bound to increase as more students awarded G*POP fellowships complete their degree programs.

If we review the number of G*POP participants since 1978 by fiscal year, we started with 340 awarded in 1978, and we are now, in 1983, at 1,200 awards. This gives us a total of, for these 2 years and the intervening years, of 5,454 students who have been assisted through G*POP.

Let me give you a summary of information by ethnicity, race, and I will include for the record such summaries as have been provided by the Department of Education. In fiscal year 1978, 46 percent of awards went to black graduate students. In 1982, 54 percent were awarded to blacks. In 1978, 16 percent of the awards were to Hispanic students, and in 1982, 19 percent.

The percentages for native Americans range between 3 and 4 percent each year. For Asian-Americans, approximately 5 percent each year. And for majority women the range has been from 18 to 26.

Turning now to placement, what are they doing, those who graduated, although G*POP is small, and although it has been in existence only 6 years, it is beginning to accomplish the goals as set out by the Congress. Most encouraging is the profile of G*POP fellows who have completed degrees. One student was honored with the prestigious National Book Award for a novel she wrote, and that was recently reported in the Washington Post.

Another fellowship graduate has been appointed Assistant Attorney General for the State of Ohio. A third student, a fellow in biomedical engineering, has developed a method using light to measure the movemant of muscles in an amputee's upper leg by determining the angle of the knee. The artificial legal can be adjusted to match the remaining limb, reducing the time it takes to learn to walk from an average of 6 months to as little as 20 minutes.

The 55 students who received the Ph.D. degree by 1982 with G*POP support, studied in a variety of fields, including physics, pharmacology, statistics, anatomy, physiology, law, medicine, and veterinary anatomy. Twelve of the fifty-three students hold faculty positions in such institutions as Michigan State, the University of North Carolina, the University of Utah, and one person is head of the computer and information science department at Tuskeegee Institute.

Seven recipients hold research and other positions in private industry, including Hewlett-Packard, Bell Labs, and Mead-Johnson.

In addition, 174 master's degrees have been awarded. Of these, 52 are in engineering, and they are employed at such places as White Sands Missile Range, the Government of Puerto Rico, Westinghouse, and 1 is a faculty member at the University of New Mexico.

Forty-one MBA's have been awarded. Two are with IBM. Several are at Jackson State University. One is at Honeywell and one at Mellon Bank.

There are 38 persons with master's in the physical sciences. They have positions with Texas Instruments, Dow Chemical, and the Oklahoma Geological Survey.

Of the 19 in life sciences, 1 is a faculty member at the University of Texas; 1 is at Redstone Arsenal.

Finally, there were 13 persons who received the J.D. degree. Interestingly, only 1 failed the bar in the first try. Some, as I indicated earlier, are assistant district attorneys. Others are in private firms. One is the first black female member of the University of Kentucky Law Journal. And others are in public defender-type work. And still others work in various Federal agencies.

Let me turn my attention now to unmet needs. The G*POP program is important, both symbolically and as categorical support for these students. But it is by no means perfect. G*POP is, in fact, underfunded for present levels of graduate student support. At Ohio State, for example, the current fellowship stipend is $7,200 for 12 months, compared to the G*POP level of $4,500.

The graduate school supplements each G*POP stipend by $2,700 in order to raise it to our minimum. In addition, a few departments such as chemistry and mathematics supplement it even more in order to make G*POP fellowships comparable to others in their disciplines.

The cost of education allowance for G*POP fellows are low. Also, they are out of step with tuition and fee levels, as has already been indicated. At OSU, for example, current costs for out of State students are $6,440 annually. G*POP allows $3,900 per student for these costs. Ohio State supplements each G*POP fellow by $2,540 during the academic year.

As you can see, without the additional support provided by the university, each fellow would be underfunded by $5,240 annually. Of course, these numbers would be lower if the student were an Ohio resident. But the point remains that these figures would be higher if this were a private, high-cost institution.

Other kinds of unmet needs for G*POP fellows are more difficult to address. But I would like to use Ohio State as an example. At our institution we use a scale to rate all fellowship applicants. All applicants that reach a certain ranking are eligible for fellowships. This year we could not find funding for 43 students who met our criteria. Of these 43, 8 were in fields for which we are funded for G*POP.

If 128 institutions participate in this program, assuming that all are not as large as OSU, this would suggest the need for approximately 250 new G*POP fellowships in addition to the 500 new fellowships that were awarded this year. The program would have to grow by 20 percent to meet this projected need. We are limited in our ability to identify outstanding students for G*POP awards because of the late notification of G*POP appropriations.

The program requires forward funding in order to encourage the best students to consider graduate education. Hence, with forward funding, the unmet need might be even greater.

Improvements in G*POP to bring the stipend level and cost of instruction allowance more in line with current cost would be very welcome, as reauthorization is considered. Authorization for a fourth year of study is also needed. As is the restoration of authorization and appropriations for part A programs for recruitment and other services.

I might say that this is a very difficult group to recruit. We are trying to recruit people who, in the past, have not viewed graduate education as a possibility. We are also trying to recruit them to fields in which historically they have not participated. So, it costs more money. But part A funds have not been available to us since 1980.

Our first priority remains the continuation of the program. We are grateful for the support we have received over the years from the House Education and Labor Committee and in particular this subcommittee.

My statement for the record does have more detailed tables. It presents specific breakdowns by academic discipline of G*POP fellows, but the time provided for me did not permit easy summary. I wish to thank you very much for the opportunity to present my views and I'd be happy to answer your questions.

Mr. SIMON. Thank you very much, Dr. Pruitt. And finally, Dr. Louis W. Sullivan, the president of Morehouse College's School of Medicine.

[The prepared statement of Dr. Louis Sullivan follows:]

PREPARED STATEMENT OF LOUIS W. SULLIVAN, M.D., PRESIDENT AND DEAN, MOREHOUSE SCHOOL OF MEDICINE, ON BEHALF OF THE ASSOCIATION OF MINORITY HEALTH PROFESSIONS SCHOOLS

Mr. Chairman and members of the committee thank you very much for the opportunity to present the views of the Association of Minority Health Professions Schoools concerning reauthorization of the Higher Education Act of 1965.

The member institutions of the Association, the Morehouse School of Medicine, Tuskegee Institute School of Veterinary Medicine, Xavier University of Louisiana, Florida A&M University College of Pharmacy, Texas Southern University School of Pharmacy, Charles R. Drew Postgraduate Medical School, and the Melharry Medical and Dental Colleges, all have a vital interest in the programs contained in the Higher Education Act. Many of the programs authorized by the Act have a profound effect on the goal of our Association to advance the educational missions and success of our institutions, and our goal of increasing the number of black and other minority health professionals in the nation.

MINORITY INSTITUTIONS AND STUDENT SUPPORT

On June 16, 1983, at a press conference in the U.S. Capitol Building, a comprehensive study was announced, funded by the Robert Wood Johnson Foundation, "Blacks and the Health Professions in the 80's: A National Crisis and a Time for Action". This study documents the severe and critical shortage of black physicians, dentists, veterinarians and pharmacists in the United States. I am pleased to submit copies of this study to the committee, which contains abundant data to support these conclusions.

Although blacks represent 11.7 percent of the U.S. population, only 2.6 percent of the nation's physicians are black; 2.9 percent of the dentists; 2.3 percent of the pharmacists; and 1.6 percent of the nation's veterinarians are black. While there may be an emerging surplus of health manpower, there continues to be an acute shortage of black health professionals in the nation. Clearly, with the results of this startling study, we feel it important that many programs authorized by the Higher Education Act give priority to those institutions who educate and train a large percentage of blacks and other minorities. In presenting the Committee with copies of this study, it is our sincere hope that you will take into considerations its findings when making your recommendations.

I also wish to submit to the Committee, copies of my commentary on this study, which was published in the New England Journal of Medicine on September 29, 1983, one of the leading medical journals in the nation. This commentary points out a number of startling facts:

(1) The percentage of black physicians in the United States increased from 2.1 percent in 1950 to only 2.6 percent in 1980, in spite of the efforts over three decades.

(2) The overall life expectancy of black Americans is 5 years less than for white Americans, and infant mortality for black citizens is twice as high as whites.

(3) In some rural counties in Georgia, a typical state in the southeastern United States, the life expectancy for black males is 51.5 years or less, while for white males in the same counties, the life expectancy ranges from 59.5 to 69.5 years.

(4) The life expectancy for black males in several rural counties in Georgia is less than that for males in Kenya, one of the less-developed and poorer countries of the world.

(5) Less than 2 percent of the faculties of U.S. medical schools are black, which means that black young people do not have sufficient role models to lift and support their career aspirations for the health professions.

(6) Because of the decrease in federal scholarships and low-interest loans available to health professions students during the past two years we have seen at Morehouse a drop in the number of our students who come from families earning less than $20,000 and a concomitant increase in the number from families with incomes of $30,000 or more.

During the past two years the debt burden of our students has increased, predominantly due to an increase in high interest loans, some with interest rates as high as 19 percent.

We are concerned that these factors, of heavy debt burdens at high interest rates, will dissuade students from choosing careers as primary care physicians, working in medically-underserved rural areas and inner cities and will push them towards the more financially lucrative specialties and more affluent suburban communities.

In 1970, when less than 2 percent of U.S. medical students were black, the Association of American Medical Colleges, which represents all of the nations medical schools, adopted the goal that by 1975, 12 percent of the students admitted to U.S. medical schools would be from under-represented minority groups. That goal was not reached. Indeed, in 1975, the peak year, only 7.5 percent of freshman medical students were black of some 10.4 percent of students, from under-represented minorities. Since that time the percentage of black freshman medical students has decreased to 6.8 percent, and total under-represented minorities comprise only 8.5 percent.

We are concerned that, unless there are significant increases in funds for student financial aid, the modest gains made in the number of black and other minority health professions students during the 1960s and 1970s will be eroded even further.

GUARANTEED STUDENT LOANS

The Association of Minority Health Professions School supports and commends the Guaranteed Student Loan Program. It is quite evident this program has been successful and has been extremely helpful to students who seek to further their education. We also support the proposal to require that all students establish remaining need to qualify for loans. However, we believe that the origination fee should remain at 5 percent or be eliminated altogether. The Association also would like to recommend an expansion or branching out of the GSL program to provide additional and separate borrowing limits for Health Professions students. In many cases, a student who attends the first four years of college uses up his or her available borrowing power during those years. A student capable and willing to continue to pursue a particular health profession that requires further education, should be allowed to continue to benefit from the Guaranteed Student Loan Program throughout their entire training.

NATIONAL DIRECT STUDENT LOAN PROGRAM

All of the Institutions of the Association are recipients of National Direct Student Loan Program funds. These funds are particularly helpful and necessary to our institutions and our students because so many of these students are financially in need and unable to bear the burden of a high interest rate loan and/or unable to secure a loan from a proprietary lender, even after completing their education and training. We are pleased with the structure of this program, and as projected by its architects, we can in many cases package student aid awards to best meet the needs of recipient students.

PELL GRANTS

The Association of Minority Health Professions Schools recommends a continuation and maintenance of the Pell Grants Program. Of particular importance to our Baccalaureate Program Pharmacy College members, Pell Grants provide a necessary source of funding to undergraduate students who wish to further their education beyond undergraduate studies. These grants provide a much needed base of funding for students who have demonstrated financial need. The Association of Minority Health Professions Schools would also like to mention that the proposals to restructure the Pell Grant Program appear to be an effort to substantially reduce the Federal Government's role in providing assistance to the nation's many educationally-talented, but needy individuals.

SPECIAL PROGRAMS FOR DISADVANTAGED STUDENTS (TRIO) (COLLEGE WORK STUDY)

The Association of Minority Health Professions Schools support initiatives, such as the TRIO program, which provides for the identification, evaluation, development, and recruitment of individuals from low-income families, who will be the first generation in their families to attend college. We also believe the program could be improved to go one step further and identify those students who are good candidates for the Health Professions.

The Association applauds the College Work Study Program, and recommends a continuation of this vital character-building source of funding.

CONCLUSION

Mr. Chairman, the institutions in the Association have already contributed greatly to the educational vitality of our country and have educated a significant percentage of the black health professionals in our country. Even in 1983, the schools in the Association have some 75 percent of the black students currently enrolled in U.S. veterinary schools, 45 percent of the black students currently enrolled in U.S. pharmacy schools, 38 percent of the black students currently enrolled in U.S. schools of dentistry and 25 percent of the black students currently enrolled in U.S. medical schools.

In order to increase the ability of young people who are poor and/or from minority backgrounds to become health professionals to serve the disadvantaged in our society, we seek your help.

STATEMENT OF DR. LOUIS W. SULLIVAN, PRESIDENT, MOREHOUSE SCHOOL OF MEDICINE, REPRESENTING THE ASSOCIATION OF MINORITY HEALTH PROFESSIONS SCHOOLS

Dr. SULLIVAN. Thank you, Mr. Chairman.

Thank you for the opportunity to present to this committee the views of the Association of Minority Health Professions Schools concerning the reauthorization of the Higher Education Act of 1965. The member intitutions of the association are the Morehouse School of Medicine in Atlanta, the Tuskeegee Institute School of Veterinary Medicine in Alabama, Xavier University College of Pharmacy in New Orleans, Florida A&M College of Pharmacy in Tallahassee, Texas Southern University School of Pharmacy in Houston, and the Charles R. Drew Post-Graduate Medical School in Los Angeles, and the Meharry Medical and Dental Colleges in Nashville.

All of these institutions have a vital interest in the programs contained in the Higher Education Act. Many of the programs authorized by this act have a profound effect on the goal of our association to advance the educational missions and success of our institutions and our goal of increasing the number of blacks and other minority health professionals in the Nation.

In June of this year at a press conference in the U.S. Capitol Building a comprehensive study by the association was announced, which was funded by the Robert Wood Johnson Foundation. This study, entitled "Blacks and the Health Professions in the Eighties; A National Crisis and a Time for Action," documents the severe and critical shortage of black physicians, dentists, veterinarians, and pharmacists in the United States. I am pleased to submit for the record copies of this study which contain abundant data to support these conclusions.

Although blacks represent 11.7 percent of the U.S. population, only 2.6 percent of the Nation's physicians are black; 2.9 percent of the dentists, 2.3 percent of the pharmacists, and 1.6 percent of the Nation's veterinarians are black.

While there may be an emerging overall surplus of health manpower in the Nation, there continues to be an acute shortage of black health professionals. Clearly, with the results of this startling study, we feel it important that many programs authorized by the Higher Education Act give priority to those institutions who educate and train a large percentage of blacks and other minorities.

In presenting the committee with copies of this study, it is our sincere hope that you will take into consideration its findings when making your recommendations. I also wish to submit to the committee copies of my commentary on this study which was published in the New England Journal of Medicine on September 29, 1983, one of the most prestigious medical journals in the Nation.

This commentary points out a number of striking facts: One, the percentage of black physicians in the United States increased from 2.1 percent in 1950 to only 2.6 percent in 1980, in spite of the efforts of over three decades.

Two, the overall life expectancy of black Americans continues to be less than—more than 5 years less than for white Americans. And infant mortality for black citizens is twice as high as for whites.

Three, in some rural areas in Georgia the life expectancy for black males is 51½ years or less. While for white males in the same counties the life expectancy ranges from 59½ to 69½ years.

Four, the life expectancy for black males in several rural counties in Georgia is less than that for males in Kenya, one of the world's less developed and poorer countries.

Five, less than 2 percent of the faculties of U.S. medical schools are black, which means that black young people do not have sufficient role models to lift and to support their career aspirations for the health professions.

Six, because of the decrease in Federal scholarships and low interest loans available to health professions students during the past 2 years at my own institutions, the Morehouse School of Medicine, we have seen a drop in the number of our students who come from families earning less than $20,000 annually and a concommitant increase in the number of such students from families earning more than $30,000 a year.

During the past 2 years, the debt burden of our students has increased, predominantly due to an increase in high interest loans, some of our students having loans with interest rates as high as 19 percent.

We are concerned that these factors of heavy debt burdens and high interest rates will dissuade students from choosing careers as primary care physicians and working in medically underserved rural areas and inner cities, and will, rather, push them toward the more financially lucrative specialties and more affluent suburban communities.

And in 1983 this is the opposite of just what is needed in terms of our physician manpower.

In 1970, when less than 2 percent of U.S. medical students were black, the Association of American Medical Colleges, which represents all of the Nation's medical schools adopted the goal that by 1975 12 percent of the students admitted to U.S. medical schools should be from underrepresented minority groups. That goal, established in 1970, has never been reached. Indeed, in 1975, the peak year for minority enrollment, there was some 10.4 percent underrepresented minorities in the freshman class that year, and 7.5 percent black students.

Since that time the percentage of minority students has decreased in the entering freshman class so that for the current year black students comprise 6.8 percent of the freshman class of our medical schools around the country and the total underrepresented minorities are 8.5 percent of all students.

We are concerned that unless significant increases in funds for student financial aid are available, the modest gains made in the number of black and other minorities health professions students during the decades of the 1960's and the 1970's will be eroded even further, and possibly quite precipitously.

The Association of Minority Health Professions Schools supports and commends the guaranteed student loan program. It is quite evident that this program has been successful and has been extremely helpful to students who seek to further their education. We also support the proposal to require that all students establish remaining need to qualify for loans.

However, we believe that the origination fee should remain at 5 percent or be eliminated altogether. The association would also like to recommend an expansion or branching out of the GSL program to provide additional and separate borrowing limits for health professions students. In many cases, a student who attends the first 4 years of college uses up his or her available borrowing power during those years.

A student capable and willing to continue to pursue a particular health profession that requires further education should be allowed to continue to benefit from the guaranteed student loan program throughout their training.

All of the students of the association are recipients of the national direct student loan program funds. These funds are particularly helpful and necessary to our institutions and to our students, because so many of our students are financially in need and unable to bear the burden of a high interest rate loan and/or unable to secure a loan from a proprietary lender, even after completion of their education and training.

We are pleased with the structure of this program and, as projected by its architects, we can in many cases package student aid awards to best meet the needs of recipient students.

The Association of Minority Health Professions Schools recommends a continuation and maintenance of the Pell grants program. Of particular importance to our baccalaureate program pharmacy college members, Pell grants provide a necessary source of funding to undergraduate health professions students who wish to further their education beyond their undergraduate studies.

These grants provide a much-needed base of funding for students who have demonstrated financial need. We would also like to mention that proposals to restructure the Pell grant program appear to us to be an effort to substantially reduce the Federal Government's role in providing assistance to the Nation's many educationally talented, but needy, individuals.

The Association of Minority Health Professions Schools supports initiatives such as the Trio program which provide for the identification, evaluation, development, and recruitment of individuals from low-income families who will be the first generation of their families to attend college.

We also believe that the program could be improved to go one step further and identify those students who are good candidates for health professions studies.

We also applaud the college work study program and we recommend a continuation of this vital character-building source of funding.

Mr. Chairman, the institutions of the association have already contributed greatly to the educational vitality of this country and have educated a significant percentage of the black health professionals in our country. Even in 1983 the predominantly black health professions schools in the Nation enrolled some 75 percent of the black students currently attending U.S. veterinary schools, 45 percent of the black students currently enrolled in U.S. pharmacy schools, 38 percent of the black students currently enrolled in U.S. schools of dentistry, and 25 percent of the black students currently enrolled in U.S. medical schools.

Although we represent a very small minority of the health professions institutions in the country this is true.

In order to increase the ability of young people who are poor and/or from minority backgrounds to become health professionals, to serve the disadvantaged in our society, we seek your continued help. Thank you for your past efforts and for your continuing support.

Mr. SIMON. We thank you also and we will enter the article from the New England Journal of Medicine in the record.

[The article from the New England Journal of Medicine follows:]

SPECIAL REPORT

THE STATUS OF BLACKS IN MEDICINE

Philosphical and Ethical Dilemmas for the 1980s

Of interest to those in medicine and the other health professions is a study recently completed by the Association of Minority Health Professions Schools.[1] The members of this association are from eight predominantly black health-professions schools: Morehouse School of Medicine (Atlanta), Charles R. Drew Medical School (Los Angeles), Meharry Medical College, Meharry Dental School (Nashville), Tuskegee Institute School of Veterinary Medicine (Tuskegee, Ala.), the Colleges of Pharmacy at Texas Southern University (Houston), Xavier University (New Orleans), and Florida Agricultural and Mechanical University (Tallahassee).

The study provides a current perspective on the poor health status of blacks in the United States. For example, it points out that the present average life expectancy of black American males is five years shorter than that for white American males (65.3 vs. 70.5 years) and that the infant mortality rate for black Americans is twice as high as that for white Americans (21.8 vs. 11.4 deaths per 1000 live births).

However, these averages obscure some appalling figures in some rural areas and inner cities of our country. For example, in Georgia today the average life expectancy of blacks is 8.4 years shorter than that for whites. In six rural counties in Georgia, the life expectancy for black males is only 49.6 to 51.5 years, whereas the average life expectancy for white males in the same counties is from 59.5 to 69.5 years.[2] In Kenya, one of the less-developed and poorer countries of the world, the average life expectancy of the male population is 51.3 years, *exceeding* that in some rural counties in Georgia.[3] In 1980, in 50 rural counties among Georgia's 159 counties, the infant mortality rate for blacks was higher than 30 per 1000 live births, and in 16 counties the rate was higher than 43 per 1000. Similar rates are found in many rural areas and inner cities all over the United States.

The Association's study documents the continuing shortages of black physicians and other black health professionals. In 1950, only 2.1 per cent of all the physicians in the United States were black. Despite the efforts of the past two decades, in 1980 black physicians represented only 2.6 per cent of all physicians in the United States. In 1981, less than 2 per cent of the faculties of our medical schools were black.

In 1983, the scarcity of black role models among practicing physicians and medical-school faculties in the United States suggests to black young people that it is not realistic to aspire to be a physician. This negative message to black youngsters is reinforced by poor counseling in high school and college, where black students are often steered into vocational courses and less rigorous academic subjects, leaving many of them poorly prepared for the study of medicine.

Compounding this longstanding problem in medicine is the recent advent of a severe shortage of funds for student financial aid, which was documented a few months ago in the *Journal*.[4] Because most black medical students come from families with annual incomes of below $20,000, the Association's study suggests that unless more funds are made available for scholarships and low-interest loans for low-income students, there is a very real possibility that the number of blacks enrolling in medical schools in the future will drop precipitously. Furthermore, the medical students who do graduate in future years will be less likely to practice as primary-care physicians in poorer communities, since they will need to earn high incomes as specialists in affluent communities, so that they can repay their large debts. Because millions of Americans still reside in rural areas and inner cities without physicians, this projected distribution of new physicians would be just the opposite of what is needed.

Also addressed in the study is the contribution of the predominantly black medical schools to the education of black physicians. Despite considerable expansion in medical education in the United States during the past 25 years, in 1981-1982, the four predominantly black medical schools (Morehouse, Meharry, Drew, and Howard) had almost 25 per cent of the black students in the nation's 127 medical schools. Six of the nations medical schools had no black students, and 75 (61 per cent) had a black student enrollment of less than 5 per cent, whereas blacks comprise almost 12 per cent of the U.S. population. These figures reflect a need for predominantly black medical schools in the United States. In addition, other studies have shown that more than 60 per cent of the graduates of Meharry and Howard medical schools practice in medically underserved inner cities and rural areas[5] (and Elam L: personal communication).

The predominantly black medical schools adhere to the same high standards of medical education, and are measured by the same yardsticks for accreditation of their programs, as are applied to all other medical schools. However, black medical schools have operated with inadequate financial resources and without access to the clinical facilities available to other medical schools.

These problems and a number of others described in the Association's study have served to deter our black young people from pursuing medicine as a career. Predominantly black health-professions schools have also been rendered financially vulnerable because of severe retrenchment in federal support for medical education and research, as well as the ravages of inflation and recession in our nation's economy.

Because black physicians and predominantly black medical schools are needed to address the severe unmet health-care needs of our poor and minority citizens, our nation and our profession face a philosophical and ethical dilemma: Either we provide the financial and other resources needed to implement our country's creed of equal opportunity, or we abandon a large segment of our population to a high infant mor-

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tality, a shortened life expectancy, debilitating poverty, a crushing burden of illness and disability, and increasing disillusionment, frustration, and loss of hope. As the most affluent of nations and the leader of the free world, we should not allow this to happen.

Education has always provided the chance for upward mobility in our society, and it still can today — for blacks and other minorities as well as for poor whites. Medical education is an important part of this opportunity for self-improvement, and the existence of this opportunity is a symbol of hope for minorities and an affirmation of the American dream.

The contribution of black institutions to the vitality and the advancement of the United States has never been fully appreciated. For example, more than half the black physicians practicing in the United States today are graduates of Meharry or Howard medical schools, each more than 100 years old. Our current deficits in the number of black physicians would be much greater if these two schools did not exist.

The Association's report suggests that black health-professions schools should be strengthened by increased financial support for their programs from governmental sources (federal, state, county, and municipal) and from the private sector (foundations, corporations, associations, and individuals). Black health-professions schools should have equal access to tax-based municipal and veterans administration hospitals and other clinical facilities for their teaching and service programs and for the opportunities to contribute to the nation's biomedical-research enterprise. The National Institutes of Health, the National Science Foundation, and other public and private research agencies should work with these schools to strengthen their research capabilities, drawing on their unique perspectives and their ability to focus on the health problems of blacks and other minority groups.

Adequate scholarships, work–study funds, and low-interest loans should be made available to medical students from low-income and minority groups, so that the best candidates available can become our future physicians and the possibility of becoming a physician will not be foreclosed to bright young people who happen to be from minority and low-income families. In association with the dramatic curtailment of federal programs for student financial aid, during the past two years at the Morehouse School of Medicine we have observed a decrease in the number of entering freshman students from families with annual incomes below $20,000 and a concomitant increase in the number from families with incomes of $30,000 or more.

All medical schools should expand and reinforce their commitment to recruiting and educating more black students. In 1978, there were only 793 black students among 14,393 medical-school graduates (5.5 per cent); by 1982, the number of blacks had *decreased* to 763 (4.8 per cent) among 15,985 medical-school graduates.

Governors, state legislatures, boards of regents, and other leaders should urge the publicly supported medical schools in their states to increase the number of black students enrolled. A recent report from the Southern Regional Education Board, a 14-state cooperative educational agency, has urged the training of more black physicians, noting that whereas blacks comprise 19 per cent of the population of the South, less than 3 per cent of the physicians in the South are black.[6] This report, like the 1980 report of the Graduate Medical Education National Advisory Committee,[7] pointed out the need for more black physicians, even while recommending reductions in the overall production of physicians in the United States.[6,7]

Many factors other than the availability of physicians affect the health status of blacks, but it is necessary to have an adequate number of physicians. It is helpful to have black physicians who understand and respect the culture, history, and social status of their black patients. It is also helpful to have physicians who live in the communities they serve and who contribute to solving community problems.

A coordinated effort is needed to respond to the crisis described in the Association's report. We need vigorous leadership from the President, the Congress, federal agencies, governors, state legislatures, and county and city governments. We also need leadership from the private sector, for it too is affected by these problems, and it has a stake in finding solutions to them.

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Mr. Simon. In connection with your testimony, Dr. Sullivan, I am pleased to say I visited the University of Illinois a few weeks ago and of the freshman class of the medical school, 19 percent now are minority students. So, there are a few schools moving in the right direction. But obviously we still have very great needs, as your testimony so eloquently points out.

Dr. Pruitt, you mentioned over 5,000 graduate students have received benefits and you pointed out the statistics that you have.

Do you have any feel what percentage of the minority graduate students are being helped by G*POP?

Dr. Pruitt. I would guess that less than 1 percent of minority graduate students are being helped by G*POP. The percentage of minority students, first of all, is very small and with—and when I say 5,000, I am counting people who have received second and third year funding. So these are 5,000 awards, not 5,000 individuals.

So, the outcome is best measured by the number of degrees completed at this point.

Mr. Simon. While we will continue the G*POP program—I think we really have to be looking beyond that to some more general assistance to graduate education if we really want to be doing the job that needs to be done.

Dr. Pruitt. That is what we believe needs to be done. We believe that these awards can be enhanced by loan programs, by college work study programs, by research assistanceships and so on.

This program cannot do the job that needs to be done alone.

Mr. Simon. Let me refer, Mr. Hartle, to your testimony here. "We recommend that students with especially high debt levels, have access to flexible repayment options to help ease financial difficulties." Who should provide those flexible loans? You're not specific on that.

Mr. Hartle. We're not specific because we didn't feel in a position to make such a judgment. We do know that the Student Loan Marketing Association has had the authority to consolidate student debts for the last 3 or 4 years and we know that there has been some discussion about whether that should be continued and whether other sources should be able to consolidate that as well.

Frankly, we really didn't study that carefully enough to be in a position to make a recommendation on it.

Mr. Simon. If I can just toss a general question to the three of you. My concern, No. 1, is with the quantity of students we're producing in the graduate field, and No. 2, in some specific fields, and No. 3, with the quality of students we are attracting into graduate programs.

And then I have a fourth concern that two of you have touched upon, and that is the student who graduates may be so overwhelmed with debt, a student who graduates from Morehouse School of Medicine faced—what percentage of your students would be black, incidentally?

Dr. Sullivan. Yes, 80 percent of our students are black. Fifteen percent are white. And 5 percent are other minorities.

Mr. Simon. OK. Let's just say one of your black students has a choice of working in one of the more affluent black areas of Atlanta, or working in an area of Atlanta that is desperately poor. Where do you go when you're faced with a big debt? When we reauthorize the Higher Education Act, how do we mold something that encourages those who enter graduate school, to go into fields that are not particularly remunerative, like serving in a depressed area or teaching French literature is not going to be overwhelmingly remunerative?

Any suggestions from the three of you? How do we—it may be something we haven't even talked about in terms of how we do this. Basically I sense from the three of you as you're talking only about tinkering somewhat with existing programs and maybe that's what we should do. But are there things beyond tinkering that we ought to do so that we attract quality people and enough people into graduate education and that, then, they respond to real needs in our society and not just where the pay is great?

Dr. PRUITT. May I respond?

Mr. SIMON. Yes.

Dr. PRUITT. We find that our greatest problem is lack of knowledge about the field, lack of motivation, and lack of preparation. So we know that preparation in the undergraduate colleges has to be strengthened, and then you also go back to the public schools, the secondary schools.

We have recently, in graduate education, joined forces with the Trio people in order to say, let's look at Upward Bound and what you're really doing. You ought not be satisfied just to get a student into college. You ought to be helping to project that youngster's aspirations into further education, graduate and professional schools, and we hope that that linkage with them will begin to open up—help to open up horizons for those students that they never thought about.

So, I would not—I believe that some of what we have done has been tinkering, has been putting band-aids on problems. But we are looking at the entire pipeline of individuals and where the "leakages" are, a term that has been used recently, and if we don't inspire and motivate these youngsters at very early ages, and if we do not expose them to high-quality secondary education and college education, then they might as well forget about graduate education.

Mr. SIMON. Let me just refashion the question a little bit. Forgetting what the law is now, if you were just to dream about what kind of program you would fashion for this country, to really move us in a direction we ought to be moving for graduate education, where should we be going?

Mr. SULLIVAN. I'd like to suggest one response, Mr. Chairman, of expanded service contingent loan programs. In medical school and other health professions schools what we face, a number of students who enter health professions schools, medicine, dentistry, what have you, with high ideals, they have chosen a health profession because of the opportunities for service, and what happens, and what we see happening among our students is that they have become quite embittered, and frustrated, and concerned because of the fact that they don't have sufficient funds to pay their light bill at the end of the month. And I could really take a lot of time to tell you about a number of things we have learned within our own student body that really is heart rending.

What happens is those students then finally become frustrated and if they persist in their studies they then, by the time they complete medical school, have chosen anesthesiology, or radiology, or other fields because of the very crushing psychological and real burden that high-debt burdens play on them.

I think most of our young people who go into health professions really are not concerned at the time they go into the health profession with earning great income. They want to be of service but they certainly don't want to be completely immobilized by their high-debt burdens. So, I would suggest that service-contingent loan programs which have been available in the past but which are disappearing be provided.

Within the health professions there has been the position that has been advocated by the Department of Health and Human Services and other agencies of really, indeed, having the very high-interest loans available to health professions students on the premise that physicians, dentists, and other health professionals earn high incomes. Certainly some do. But there are many who do not and there are many who really would like to go and spend their lives where they feel their services are most needed, but they are prohibited, or are being increasingly prohibited by having debts not—I think some of the data Mr. Hartle gave you, really, were averages. There are some students who are completing medical and dental school now with debts of $50,000 and $60,000, with interest rates 14, 16, 18 percent, and paying those loans off over a period of 10 or 15 years means that those young people will be paying back $200,000 to $250,000 and this coming at a time they're starting, these repayments starting, at a time when they are trying to establish practices, they have families, they have mortgages, et cetera, and thus there's always a balance between what the young person will do with his or her career, with what their other personal and family obligations are.

So, our concern and our plea is really not—certainly scholarships, we would welcome and I think that in the health professions we have seen those disappear, but even without scholarship aid, if there were programs available where young people could have loan programs, where they would make repayments based upon their future professional activities, we think that would help.

Finally, I would add that we look and talk about dollars, but really the erosion of the educational environment that occurs within a health professions school by having students unable to meet their bills, that contributes to an erosion of the quality of their educational experience, the experience that they have, and thus this is something else that we are most concerned about.

Mr. SIMON. Thank you. Mr. Hartle.

Mr. HARTLE. I'd make a brief point on that and then my colleague, Dr. Wabnick, has something that he would like to add. The first part of your question, Mr. Chairman, is about the quality of students going into graduate and professional education. I believe that the evidence would show that the best—the Nation's best undergraduates still continue to go on to graduate and professional schools, but there are very likely shifts going on in the programs that they are pursuing. For example, law and medical schools are probably attracting more students than before and more of better quality students. That is to say, those with the highest grade-point averages and those who graduated with honors.

I noticed that Dr. Sanderson is testifying later this morning and he has examined some of that evidence.

I also know of research that has found that among minority students, many of the best minority students immediately go into the business world because they see it as more lucrative, more immediately remunerative. I think the points that Dr. Sullivan was making are very relevant here, that they see themselves as being locked in because of the high cost of graduate and professional schools, especially medical schools.

Dr. **Wabnick**. Mr. Chairman, if I may, one of the points that we were trying to get across with the recommendation about flexible repayment was that one form of flexible repayment which you might have would allow for a more graduated repayment in the early years. That's when we found that students encountered the most, the heaviest, loan burden was in the first 2 or 3 years of their repayment period.

So, in concert with extending their repayment period, which would automatically reduce their payments, graduating their repayments in the early years, perhaps the first 5 years, would also tend to offset some of the dramatic repayment figures that they would see when they first get out of school.

Dr. **Pruitt**. Mr. Chairman, with your permission, I would like to respond to your invitation to dream. My dream would be of a world where, or a country where there would be long-term Federal policy that is designed to encourage and, therefore, support youngsters from the minority groups that are now underrepresented, to go to graduate school, and long term is my dream because with the annual activity that has to go on in order to secure the funds and determine whether or not the fellowships will be available.

We cannot say to a youngster now, in junior high school, that if you want to go to graduate school your country, your Nation, your Government, is going to assist you to do that. That's my dream.

Mr. **Simon**. Thank you. Mr. Coleman.

Mr. **Coleman**. Mr. Hartle, in your statement, you say something here on page 5 about—I wasn't sure what you were saying here. Are you applying a value judgment? Are you saying that you did not find any suggestions in the literature that indicate education loan repayments should exceed 15 percent of after-tax income? Are you suggesting that this be a ceiling or do you call for a value judgment in this area?

Mr. **Hartle**. No, sir; we looked at the literature. We distinctly chose not to make any sort of a value judgment about what would be an appropriate, manageable level. We had several conversations with the staff of the National Commission, especially Bob Snyder, who worked closely with us, and they did not have strong views and we felt it was inappropriate for us to make such a judgment. We simply canvassed the literature to see what others have said.

Mr. **Coleman**. Have there been any studies made to try to determine what percent of either after-tax or disposable income this represents as far as the defaults?

Mr. **Hartle**. I am not aware of any studies on that matter.

Mr. **Coleman**. The law student seems to have one of the biggest burdens in this situation. Why do you think people are attracted into law school, incurring these types of debts if their first-year, second-year, probably third-year income is so low?

Mr. **Hartle**. It's very hard to say. We'd just be speculating. I think there is an aura of the law and the things that one can do with a legal degree. It seems to be a degree that people feel can lead to remunerative careers as well as careers in a variety of other fields.

I suspect that they underestimate the early-year earnings in the legal profession and that probably accounts for that.

Dr. **Wabnick**. If I could make a point, we've found in all cases the debt burden declined over time. It declined rather rapidly in the case of lawyers because their income rose rather quickly in the 10-year period when they were likely to be repaying their loan.

For the arts and sciences Ph. D. graduates we found that their debt burden did not decline very rapidly. It stayed at about the same level as it was in their first—in the beginning of their repayment period. Because their incomes did not show this steep growth in the outyears.

Mr. **Coleman**. Would any of you care to comment on the practicability of having a two-tiered system in which some of the recipients would have graduated payments and others not, based on this data? Could a two-tiered system in a practical solution?

Mr. **Hartle**. I think in policy terms it would be desirable, based on the evidence that we have compiled. I'm not in a position to say whether administratively it would be a system that would be easily workable. And I think that would be something that the committee and the Congress would need to give careful attention to.

Mr. **Coleman**. Dr. Wabnick.

Dr. **Wabnick**. I don't think that a two-tiered system should necessarily be imposed on the basis of occupational choice. I would think it could be imposed on the particular level of borrowing. You might come to a conclusion that a particular level of borrowing was onerous, and therefore, and after that level, you might say graduate—the students should have the option for graduated repayments in those 3 or 5 years of their repayment period.

Mr. **Coleman**. Dr. Sullivan, I think that most of your study that I have reviewed here dealt with medicine and medical students. Is there any comparable discussion about minorities in the law? Do either of you know any comparable statistics concerning minorities in law?

Dr. **Sullivan**. I really could not comment on law students, except to note that blacks entering law school also continue to be quite underrepresented. But financial perspectives I cannot.

Mr. **Coleman**. Thank you.

Mr. **Simon**. Mr. Petri.

Mr. **Petri**. Thank you, Mr. Chairman.

This has a lot of interest, this dream question, this question of what you would like. I am curious whether you had a chance to review some of the proposals that have been made for some new Federal loan program of an income contingent nature, whether that would meet some of the dreams that you've outlined for something that was either service contingent or graduated to reflect the difficulties people have in their earlier years of making payments?

I realize there are administrative difficulties in any of these different programs, but would something of that sort be worth pursuing as far as you're concerned?

Dr. **Sullivan**. Certainly in medicine and the other health professions I think it would be. The problem—we would certainly argue for variety and flexibility in methods of financing graduate and professional education, and this would certainly be one that we think should be explored as to its availability.

Because, again, it's our experience and our speculation that among health professions students the issue is not really repayment of loans, but having loans that are repayable, and because of a problem that we face now, we find—we believe that the reason we are seeing changes in the profile of our student bodies, certainly among minority students thus far, and I would project that in another few years we will see significant changes in majority students as well, is the fact that now for the first time we are unable to tell students: "Do the best work you can and get admitted to medical or dental or veterinary school. Don't worry about the financing. That's going to be available." That's not the case any more. And we feel, therefore, students are selecting themselves out from applying to health-professions school because they do not see this as a realistic option. They are aware of the high-interest loans that cause the burden and they're aware of the heavy debt burdens that students are now experiencing, and they are choosing to go elsewhere or not go at all because of that, because a student from a low-income family cannot imagine borrowing $10,000, $15,000, $20,000 a year that a student, perhaps from a more affluent family can see that as an investment in their future.

So, we would really argue for a variety of support programs available, loan programs including flexible-repayment options, continued scholarship funds for the most needy of students so that we still will continue to have, going into the health professions, individuals from a variety of backgrounds.

Dr. **Wabnick**. If I might add, the idea of income-contingent loans has been around for at least 10 years, since I've been involved in this area. And I think the shortcoming from the Federal standpoint has been the administration of it. At a lower level, that is, the institutional level, it appears much more manageable. Several medical schools, I think Yale and Harvard, have set up their own tuition-income-contingent repayment programs. It's much easier at that level for them to follow the students and also, since you're dealing with a group, a homogenous group of students, those in particular professions, it's much easier to follow them and to track what their incomes are and to adjust the loan terms accordingly.

Mr. **Hartle**. The administrative difficulties that ensued with the cancellation provisions under the National Direct Student Loan program for teachers and what not, gives some indication, I think, of the problems that you might encounter with an income contingent loan. Certainly just keeping track of the income of all the various student borrowers would be an important and difficult task.

I, frankly, think the only way you could do that would be through the Internal Revenue Service. And that's probably the best way to go if the committee wants to pursue this matter further.

Mr. PETRI. Dr. Sullivan, I noticed in your report, you spoke of the need for increased recruitment of minority students by the armed services and the proportion of armed service scholarships going to minority students. I wonder if you could expand on that a little, perhaps discussing some of the reasons for that or some ways we might contemplate to overcome this problem.

Dr. SULLIVAN. Yes. This is, again, an attempt to look at the full array of mechanisms whereby minority students can finance their health professions education as well as address the need of the military. Certainly minorities are quite highly represented within the military and the military happens to need many more health professionals, including physicians.

Unfortunately, the military scholarships are chosen solely on the basis of grade point averages and aptitude test scores, and that system actually works to the detriment of the selection of minority students. There is no data whatsoever to suggest that the quality of physician has any relationship to that physician's test scores in medical school or upon entry to medical school. Such things as the medical aptitude test, for example, predicts performance in the first 2 years of medical school but not—has no predictive capability in terms of the clinical years in medical school.

So what we are arguing for in our study is another standard to use by the military in choosing the recipients of their scholarships, as well as an expansion of the military program, because the military has a need for more health professionals, but actually the expansion of that program has been minimal.

Mr. PETRI. Thank you. I don't want to prolong it. May I ask a few more questions?

Mr. SIMON. You may proceed.

Mr. PETRI. I know we sometimes have a 5-minute rule.

The subcommittee is expected to recommend that the Federal Government should increase grants for operating support to all college and university libraries with "much larger grants to major research universities." Do you agree with this recommendation and could you elaborate on how much additional support is needed for research universities?

I don't know who would like to answer that. Do you have any feeling about that?

No comments? Well, then the second question was that in the science and engineering fields, there's a problem of talented faculty members, evidently, leaving to join industry, which has caused significant concern. Would you have any ideas as to what, if anything, could be done at the Federal level to address this problem? Or is that a problem for the universities to work out themselves?

Dr. PRUITT. I find, if I may respond, Mr. Petri, that it is difficult to recruit minorities into those fields because of the high salaries awarded or available in private industry. The way that we counteract that or could counteract that is by increasing the stipend level for study in graduate school or entering into a joint venture with various businesses and industries in order to increase that level of youngsters graduating with a B.S. degree in engineering can command very high salaries and therefore $7,000 stipend in graduate school doesn't look very good. So, it is the income that's in industry that's drawing them away.

We have, at Ohio State, removed what was previously a very restrictive supplementation level for fellowship recipients and we are allowing now a company to contribute or supplement one of the fellows by as much as $10,000 if we give him $7,000. But we have not gotten that kind of support from the Federal Government.

Mr. PETRI. Thank you. One last question. If you compare graduated repayment to income contingent repayment, trying to achieve the same objective, wouldn't income contingent repayment be superior in that someone's income might not go up and then they would be back in the same box that we are trying to avoid with the graduated repayment program? It lacks flexibility as compared with the income contingent plan.

Dr. WABNICK. It does. You get down to the problem in an income contingent system of never repaying, if a student's income doesn't go up. You even had, in the past, you even had people suggesting that an income contingent plan provided some small disincentive to work. I don't believe that myself, however. [Laughter.]

But you never know.

But the point is that there has to be an end, there has to be a way to cap, the repayment at the amount of the loan in order to keep the lenders interested in making the loans.

Mr. SIMON. We thank you very, very much for your testimony. Our next panel, Dr. Alfred Sussman, dean of the graduate school of the University of Michigan, Dr. Allan Sanderson, associate dean of the graduate school of Princeton University, Ms. Roberta Ropik, associate director for financial aid at Northwestern University in the State of Illinois.

We welcome the three of you. Incidentally, Mr. Coleman and I will have to leave in a few minutes because of another problem in the schedule. But it does not indicate a lack of interest and we will be following what is said and we'll get reports from our staff about what is said.

Dr. Sussman.

[Prepared statement of Dr. Alfred Sussman follows:]

Prepared Statement of Dr. Alfred S. Sussman, Interim Vice President for Graduate Studies and Research, Horace H. Rackham Graduate School, University of Michigan, Ann Arbor, Mich.

Introduction

I am Alfred Sussman, Vice President for Graduate Studies and Research at the University of Michigan. The Consortium on Financing of Higher Education (COFHE) is pleased to have been invited to testify on a subject that has been of great interest to us.

Over the past three years, the Consortium has examined issues related to the financing and general condition of graduate education in the United States. The COFHE Graduate Project has been a unique effort in that it has included twenty leading public and private research universities from across the country. As a result, we have been able to respond to the issues raised by the Subcommittee as it holds its hearings leading to reauthorization of the Higher Education Act of 1965. This document will be responsive to two of the issues raised by the Subcommittee, including The influence that various debt levels have on the career choices of graduate and professional school students, and The level of unmet need among graduate students and what impact do rising costs have on the quality of education and caliber of students in the lower salaried disciplines and professions.

Unmet Needs and Loan Debts

We have studied the sources of graduate student support and compared these with the financial requirements faced by graduate students. Our findings, which are illustrated in Appendix 1, show that in both the private and public universities there is a very substantial proportion of expenses that are not met with the current combined levels of fellowships, research and teaching assistantships and loans. For example, of the 20 graduate schools studied, only eight had more than 50% of the graduate student support available from these sources and only one had as much as 80% of the needs of students met. By contrast, only two years earlier more of these institutions were able to meet more than 50% of graduate school need. At the University of Michigan, as Appendix 2 shows, in 1981-82 the average dollars required for a graduate student was $9,307; yet, we could provide only $3,793 to meet that total.

Therefore, since 1979, many students have faced an all too familiar trend in funding: reductions in federally funded fellowships and research assistantships have been offset by increases in loans. That this has been the case is shown in the results of a survey of graduating seniors, the results of which appear in a COFHE report, "Beyond the Baccalaureate." Appendix 3, taken from this report reveals a loan debt in the range of $5,000 to $7,500 for almost one-third of the undergraduates in the private institutions studied, with 42% of them having incurred debts of over $7,500. Among seniors from the public universities in the study, two-thirds reported loan debts in the $2,500-$9,999 range.

Effects Upon Choice of Careers

What are the effects of this situation upon the choices made by able undergraduates in respect to careers in graduate and professional education. Appendices 4 and 5, which are taken from "Beyond the Baccalaureate" address this question. Thus, two-thirds of the seniors in private (Appendix 4) and public institutions (Appendix 5) considered attending graduate school in the arts and sciences but, 31% of those in the private and 40% in the public sector decided not to pursue graduate education. Only 15% and 12% of these two groups respectively planned to go directly into graduate school after graduation. The report found that among those in this set of excellent students who said they might some day attend graduate school, financial considerations were a strong factor in the decision making process (Appendix 7). This conclusion holds for all of the disciplines considered, including the Applied Sciences, Humanities, Natural Sciences and Social Sciences. Furthermore, this point is reinforced because four of the five major reasons for delaying graduate school relate to financial matters, including support.

Has there been a change over time in the career choices of excellent undergraduates who are headed for further education? A study of the highest achievers among students at several uiversities was conducted by the COFHE project in an effort to answer this question with the results shown in Appendix 8. In this case, members of Phi Beta Kappa from Northwestern University were studied and the data indicate convincingly that since 1955 there has been a flight of the best students from Ph.D. programs into the professions. The drop has been precipitous between 1975 and 1982, a period when federal support was eroded by inflation. Although the numbers of students involved in this study is small, studies from several other universities lead to similar conclusions. For example, at Harvard in 1964, 77.2 percent of the seniors who graduated with highest honors went out on to graduate schools in the arts and sciences; however, in 1981, this figure was only 30.8 per cent.

The results of the trends we have discussed are complex and all on the negative side of the ledger: students with debts from their undergraduate years are choosing to pursue professional degrees which often take a shorter time to complete and which result in higher paid careers. Students who do enroll in graduate studies take longer to complete their work and, more often than professional students, drop out before obtaining a degree. Graduate work increasingly offers an unattractive option to students who, being rational economic beings, recognize this fact and say, "No Thank You!", to research, treaching and scholarship. The cost to our society, in terms of its cultural, economic and technological bases may be very great if these tendencies continue so we must examine means to reverse this trend.

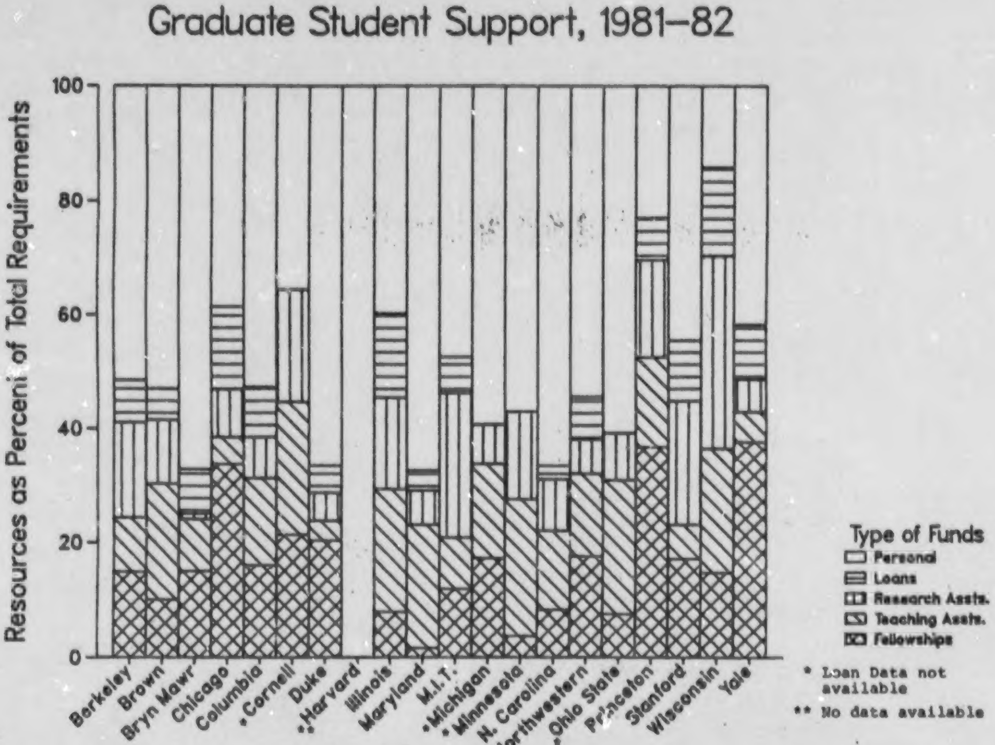
Recommendations

Our research supports the conclusion that fellowships and traineeships offer some of the most desirable forms of stimulus to the enrollment of graduate students and to completing their degree work expeditiously and successfully. At the universities producing the most Ph.D. candidates, the erosion of training grant support beginning in the mid 1970's, and the termination of many of the large endowment programs supporting graduate students, such as the Ford Foundation and Woodrow Wilson programs, provoked a real crisis. Decreasing enrollments and fears for the quality of these programs have arisen, in part at least, because of such flagging support. My colleague, Dean Allen Sanderson of Princeton University, will deal with these forms of graduate student support but I will restrict my attention to the College Work Study Program.

College Work Study is an excellent way to help to lower the debt burden of students: students prefer work to borrowing; important work, such as research and teaching, is performed; this work is an important part of the graduate experience; and, such federal support contributes to increasing the supply of the experts upon whom we must rely to enrich our culture, knowledge base and technology.

We are aware that, when the Administration recently requested an additional $300 million in College Work Study funding, some were of the opinion that not all of such increases could be utilized by eligible institutions. This may be true to an extent but were a modest lead time to be built into the program the increased funds would be well-used and perform the important roles I discussed earlier. In addition, given the changes that have occurred since the adoption of the alottment formula and regulations, we suggest that it may be wise to review them.

This opportunity to present the results of our research and to apply them to the important issues you raised is greatly appreciated. We stand ready to help you further as your needs dictate.


Graduate Student Support, 1981–82

APPENDIX 2

Financial Requirements for Graduate Students, 1981-82 at Selected Institutions

Institution	Fall Enrollment	Living Expenses	Average Tuition	Dollars per Student	
				Required	Available
Berkeley	9180	$6,144	$1,801	$7,945	$3,261
Brown	1179	7,780	6,783	14,563	6,044
Bryn Mawr	359	7,370	2,608	9,978	2,508
Chicago	2189	6,700	5,754	12,454	5,841
Columbia	3194	7,793	3,326	11,119	4,277
Cornell	3735	7,130	5,169	12,299	7,930
Duke	1545	6,792	3,310	10,102	2,905
Illinois	7581	6,300	1,792	8,092	3,680
Maryland	7526	5,082	959	6,041	1,764
M.I.T.	4435	8,920	7,400	16,320	7,559
Michigan	6254	5,986	3,321	9,307	3,794
Minnesota	7775	4,981	2,863	7,844	3,375
North Carolina	4227	6,240	1,603	7,843	2,441
Northwestern	2264	9,786	5,239	15,025	5,729
Ohio State	9814	4,986	2,066	7,052	2,766
Princeton	1468	6,000	6,886	12,886	8,986
Stanford	5770	8,020	5,249	13,269	5,955
Wisconsin	9113	3,955	1,961	5,916	4,164
Yale	2399	7,950	4,920	12,870	6,265

Note: "Graduate Students" are hypothetical unmarried individuals with no dependents, who enroll for two terms or three quarters. "Living Expenses" is a 12-month budget for such a student; it includes a book allowance for two terms or three quarters. "Average Tuition" is the various tuition rates (including any mandatory fees), multiplied by the numbers of students paying these rates, divided by the Fall enrollment. "Required Dollars per Student" is Living Expenses plus Average Tuition. "Available Dollars per Student" is based on the table titled "Financial Resources for Graduate Students, 1981-82", and includes all sources except Loans (see other side).

10/25/83

Financial Resources for Graduate Students at Selected Institutions, 1981-82

Institution	Federal Fwps	Endowment Fwps	Gen.Fund Fwps	Private Fwps	Teaching Assistants	Federal Res. Assts	Other Res. Assts	Loans
Berkeley	$3.26 (831)		$1.63 (1292)	$6.04 (2240)	$6.86 (1668)	$9.73 (2059)	$2.43 (515)	$5.47 (787)
Brown	.53 (89)	$.09 (22)	.91 (105)	.22 (36)	3.46 (529)	1.70 (294)	.22 (38)	.95 (251)
Bryn Mawr		.16 (48)	.26 (60)	.12 (19)	.32 (46)	.01 (2)	.03 (6)	.28 (110)
Chicago	3.21 (347)	.37 (166)	3.62 (932)	1.99 (446)	1.30 (135)	*	2.30 (230)	3.96 (895)
Columbia	1.30 (165)	.75 (*)	2.09 (294)	1.49 (265)	5.38 (627)	2.17 (296)	.39 (53)	3.15 (790)
Cornell	2.19 (245)	*	4.47 (485)	3.16 (354)	10.70 (1091)	*	9.10 (1009)	? (?)
Duke	.95 (117)	.27 (56)	1.80 (482)	.16 (19)	.54 (212)	.66 (121)	.11 (25)	.74 (204)
Illinois	1.71 (221)	.90 (156)	1.88 (559)	.38 (58)	13.16 (2341)	8.31 (1212)	1.54 (269)	9.08 (3307)
Maryland	.32 (58)	.01 (1)	.38 (210)	.03 (4)	9.80 (1450)	2.02 (422)	.72 (117)	1.57 (659)
M.I.T.	3.29 (271)	1.01 (?)	2.08 (?)	2.32 (214)	6.43 (399)	15.26 (1207)	3.14 (248)	4.56 (1215)
Michigan	3.13 (565)	.42 (?)	4.92 (1815)	1.62 (?)	9.58 (1818)	1.79 (483)	2.26 (497)	? (?)
Minnesota	.86 (130)	.09 (30)	1.00 (165)	.30 (63)	14.60 (2030)	*	9.39 (1420)	? (?)
North Carolina	1.61 (383)	.24 (61)	.33 (123)	.58 (169)	4.57 (1160)	1.80 (439)	1.20 (412)	.78 (?)
Northwestern	.75 (96)	.13 (27)	4.52 (363)	.61 (92)	4.91 (493)	1.86 (300)	.19 (31)	2.56 (535)
Ohio State	2.13 (167)		2.53 (237)	.61 (90)	16.15 (2073)	*	5.73 (701)	? (?)
Princeton	1.26 (168)	1.99 (200)	1.99 (200)	1.71 (200)	2.99 (245)	2.22 (184)	1.03 (95)	1.40 (400)
Stanford	2.67 (482)	.75 (?)	2.42 (?)	7.29 (?)	4.53 (1129)	*	16.70 (2336)	8.16 (1757)
Wisconsin	3.47 (359)	.48 (79)	2.41 (262)	1.61 (236)	11.67 (1491)	10.71 (1327)	7.59 (940)	8.32 (2567)
Yale	2.76 (271)	1.16 (158)	6.77 (998)	.92 (147)	1.64 (841)	1.61 (299)	.18 (33)	2.97 (1285)

Note: Dollar figures are in millions. Figures in parentheses are headcounts of supported students (FTEs at Princeton); headcounts may be duplicated across columns, except at Northwestern. A "*" in a column indicates inclusion in the next column to the right.

APPENDIX 3

Total Amount of Educational Loans Owed Upon Graduation

Private Institutions	Percentage
$ 1 - 2,499	8%
$ 2,500 - 4,999	20
$ 5,000 - 7,499	30
$ 7,500 - 9,999	27
$10,000 or greater	15
	100%

N = 2,972

APPENDIX 4

Public Institutions

Total Amount of Educational Loans Owed Upon Graduation

	Percentage
$ 1 - 2,499	29
$ 2,500 - 4,999	24
$ 5,000 - 7,499	27
$ 7,500 - 9,999	14
$10,000 or greater	6
	100%

Weighted N = (1,036)

(Source: COFHE, Beyond the Baccalaureate...)

APPENDIX 5
Private Institutions
Graduate School Orientations/Fall Activity by Sex

				Women in	
		Men	Women	Coed Colleges	Women's Colleges
A. Pct. Who Considered Graduate School		65	72	71	74
	N =	1,650	2,291	1,490	803
B. Graduate School Follow-through					
Not-going		31%	31%	31%	31%
Delayed entry		48	59	60	58
Fall entry					
Master's		10 >20	6 >10	6 > 9	6 >12
Doctorate		10	4	3	6
		100%	100%	100%	101%
	N =	1,078	1,655	1,064	593
C. Fall Activity					
Graduate School		13% >36	7% >22	7% >21	9% >25
Professional School		23	15	14	16
Employment		54	67	68	67
Other, undecided		11	11	12	9
		101%	100%	101%	101%
	N =	1,697	2,310	1,499	812

APPENDIX 6
Public Institutions

Graduate School Orientations/Fall Activity by Sex

	Men	Women
A. Pct. Who Considered Graduate School	66	67
Weghted N =	(841)	(912)
B. Graduate School Follow-through		
Not-going	43	37
Delayed entry	41	55
Fall entry		
Master's	11 >16	5 >7
Doctorate	5	2
	100%	99%
Weighted N =	(553)	(612)
C. Fall Activity		
Graduate School	10 >42	5 >22
Professional School	32	17
Employment	53	70
Other, undecided	5	8
	100%	100%
Weighted N =	(850)	(940)

APPENDIX 7

Selected Major Reasons (Academic/Financial) for Delaying Graduate School Entry by Field for B+ Plus Students

(percentages;multiple responses permitted)

	Applied Sciences	Humanities	Natural Sciences	Social Sciences
Tired of academic aspects of school	56%	36%	39%	36%
Need to improve finances	47	42	31	47
Uncertainty of aid programs	22	19	12	20
Debts too high	18	13	10	15
Unable to obtain aid	6	4	5	6
N =	32	373	134	336

NORTHWESTERN UNIVERSITY

APPENDIX 8

Phi Beta Kappa Study

Highest Degree Only*

	1955	1965	1975(76)	1982
MA/MS	2 (12.5%)	4 (16.7%)	4 (10%)	1 (2.4%)
MBA	0	0	2 (5%)	1 (2.4%)
Other master's	3 (18.75%)	3 (12.5%)	0	3 (7.3%)
TOTAL MASTER'S	5 (31.25%)	7 (29.2%)	6 (15%)	5 (12.2%)
JD	1 (6.25%)	5 (20.8%)	8 (20%)	9 (22.0%)
MD	1 (6.25%)	4 (16.7%)	15 (37.5%)	14 (34.1%)
PhD	6 (37.5%)	4 (16.7%)	8 (20%)	2 (4.9%)
None	3 (18.75%)	4 (16.7%)	3 (7.5%)	11 (26.8%)**
TOTALS	16	24	40	41

*For respondents who received both an MD and PhD or JD and PhD, the PhD is shown as the highest degree.

** 5 respondents indicate intentions to enroll in MBA programs in 1984 or 1985; 2 indicate intentions to enroll in master's programs. Therefore, only 4 respondents (9.8%) show no plans for graduate education.

STATEMENT OF DR. ALFRED SUSSMAN, DEAN OF GRADUATE SCHOOL, UNIVERSITY OF MICHIGAN; DR. ALLAN SANDERSON, ASSOCIATE DEAN, THE GRADUATE SCHOOL, PRINCETON UNIVERSITY; AND ROBERTA POPIK, ASSOCIATE DIRECTOR FOR FINANCIAL AID, NORTHWESTERN UNIVERSITY

Dr. SUSSMAN. Mr. Chairman, with your permission, I wonder whether it would be all right for us to vary the order of presentation.

Mr. SIMON. That would be perfectly all right.

Dr. SUSSMAN. If I were to present a small introduction followed by Dr. Sanderson and then Dr. Popik.

Mr. SIMON. Fine.

Dr. SUSSMAN. A consortium on the funding of higher education, COFHE, we're very pleased and honored to have been invited to testify on the important subject the subcommittee is considering. Over the past 3 years, the consortium has examined issues related to the financing and general condition of graduate education and it has been a unique effort in that it has included 20 of the leading public and private research universities from across the country. As a result, we've been able to respond to the issues raised by the subcommittee as it conducts its hearings. I should like to introduce my colleague, Dr. Sanderson, who will consider some data and diversity in the patterns of financing of graduate students and others.

Thank you.

Mr. SIMON. Before you testify, Dr. Sanderson, I note your name is Popik rather than Ropik. I'm sorry it was a typographical error here. My apologies.

[Prepared statement of Dr. Allen Sanderson follows:]

PREPARED STATEMENT OF DR. ALLEN SANDERSON, PRINCETON UNIVERSITY

"Graduate education" is not one entity but rather 400 different research-doctorate institutions and ten times that many departments. It is a very diverse community, and its heterogeneity often renders generalizations inappropriate. Its continued vitality and effective approaches to its current problems depend to a large extent on recognition of this basic structure.

Current pressures at Yale are not those of the State University of New York at Buffalo. Conditions facing the humanities are not the same as for the sciences; and engineering is yet a separate case. Among graduate schools we see a mix of both large and small, public and private, technical institutes and liberal arts emphasis.

There is also a diversity of students: some come directly from colleges, others have substantial work experience; some enroll full-time, but a third are part-time students; in some fields a sizable proportion of graduate students come from abroad. Unfortunately, there is not a healthy diversity with regard to race, or, in some science and engineering fields, gender; indeed, the representation is inadequate to the point of unacceptability. Less than 5 percent of applicants to many COFHE-Project institutions are black or hispanic, and women constitute less than 10 percent of the pool in some important fields. Most universities have genuine, determined recruitment programs, but the applicant pool remains small. A coordinated national effort of pre-graduate advising and training systems is essential.

Financing for graduate education is equally diverse, with universities, the private sector, state governments, and federal programs all making significant contributions. Students are supported by fellowships, teaching and research assistantships, and self-help opportunities (such as part-time employment, College Work-Study, and participation in federally guaranteed loan programs).

The federal government, both because of the important "spillover" benefits accruing to the nation as a whole from an investment in the advancement of knowledge and its broad national perspective, can and ought to provide steady financial support and symbolic encouragement. Portable merit fellowships (such as the N.S.F.

program and the legislated Graduate Fellows Program in Part C of Title IX), institutional block grants for outstanding departments (or, as in the case of the Graduate and Professional Opportunities Program, to provide access), federally-sponsored research (including support for equipment and facilities as well as for graduate students—such as the Danforth-Eagleton initiative), and continued sponsorship of self-help programs provide appropriate public recognition of the importance of graduate education.

The pattern of graduate-student financial assistance has shifted dramatically over the past decade and a half, producing a disequilibrium that is dampening the enthusiasm for graduate study and detering talented students from pursuing it. At Princeton, for example, fifteen years ago almost 60 percent of graduate students held fellowships won in national competitions; 20 percent were being supported by University fellowships; and another 7 percent served as teaching assistants. Today, through fellowships and teaching appointments the University is supporting almost twice as many, or over 50 percent of its students. Only 20 percent now hold outside fellowships (even though our students compete as successfully now as they did before; the availability of such aid is simply not what it was fifteen years ago); about 10 percent are completely dependent on their own resources. Whereas fifteen years ago the aggregate indebtedness in the Graduate School was under $50,000, for the current academic year our one thousand United States students will borrow $1 million. Nationally, in 1968 the federal government provided over 50,000 fellowships, including many in the humanities and social sciences. Today that number is only about 6,000, and the allocation is heavily weighted toward applied science and engineering disciplines.

The shifts noted above have increased dramatically the net costs for anyone contemplating graduate study. Students must now commit more of their resources (including borrowing, which is a commitment of their expected future resources). Moreover, in many fields real earnings for doctorate recipients lag behind those for other professionals. Finally, increased program length—by one to two years on average in the last decade—raises the level of foregone income, an implicit but very important component of the costs of graduate education.

As one might expect, the significance of these changes has not been lost on potential applicants. Across the 350 members of the Council of Graduate Schools, the average number of applications declined by 23 percent between 1974 and 1981. At the twenty COFHE-Project institutions, the declines have been less pronounced (only 5 percent), but the aggregate figure masks tremendous shifts within divisions: while applications to science departments held steady from 1972 to 1980 and rose 73 percent for engineering, the humanities and social sciences—areas that include many first-rate departments in this country—registered declines of 47 percent and 28 percent, respectively.

With the drop in applications and enrollments, there is a real concern about a concomitant reduction in both quality and opportunity. It is clearly in the national interest to encourage the finest students to continue their education—and to make it financially possible for them to do so regardless of personal and family circumstances. There is no question that the very best students have access to others careers, and that the pressures to forgo graduate training can be particularly intense for students who must support themselves and their families. For example, respondents to a 1977 survey of 18,000 Woodrow Wilson Fellows (a program of excellence spanning 25 years from 1946–1971) listed finances—the need to earn a living or the lack of research funds—as the most important factor by far in delaying or preventing degree completion. Survey data from 700 doctoral students admitted to COFHE-Project schools for the 1981–82 academic year showed that over 75 percent of that group gave finances as "critical" or "major" in their decision making.

Reporting on meetings last fall with campus representatives for the new Mellon Fellowships in the Humanities program, Robert Goheen, the program director and former Ambassador to India, reported that:

"With only a very few exceptions, at each place I had confirmed again that many of their brightest undergraduates have not been going on into graduate study recently. Many admitted that they had not been encouraging even the very able to do so. Some said talking down of a career prospects in academia was widespread among their colleagues.

"[There was] a widely shared perception that they are encountering noticeably fewer very bright, very challenging graduate students that ten years ago and on the whole the quality is down at the graduate level . . . ."

Belief that proper inducements can strengthen the applicant pool is borne out by the overwhelming response by young humanists to the Mellon program (a commitment that will terminate after ten years) and the astounding increase in applications to leading humanities departments this past year, the first upturn in many years. Equally important, but poorly understood, is that both demographic factors and other forms of evidence (provided through contact with department placement officers, for example, and an extensive recent survey of carrer paths of Whiting Fellows in the Humanities) suggest strongly that there are, and will continue to be in the decade ahead, good employment prospects for the best qualified doctorate recipients.

Ultimately, our concern is two-fold: that the very best potential candidates in all fields, representing the full diversity of the American population, be encouraged and supported adequately in the pursuit of advanced learning, and that departments receive the support they need to offer programs of quality. At this point in our history, our national investment in graduate education seems not adequate in either respect.

STATEMENT OF DR. ALLAN SANDERSON, ASSOCIATE DEAN, GRADUATE SCHOOL, PRINCETON UNIVERSITY

Dr. **Sanderson**. I'm Allan Sanderson, representing the graduate school at Princeton University and I've also served for the last 3 years as a member of the steering committee of the COFHE graduate aid project. What I want to say in my remarks pertains mainly to doctoral study in the arts, sciences, and engineering. I have three separate documents of research that has been done at Princeton and through the consortium, which I would like to leave as part of my testimony.

In my oral remarks I just want not to reiterate what I have written, but to emphasize three points, things that have come from the 3-year study we have been engaged in.

The first is that graduate education is a very diverse community. There are 400 separate graduate schools. There are over 4,000 departments. And it's a unique structure.

In terms of fields of study, the conditions facing the humanities are not the same as the conditions facing the sciences, and engineering has its own special case. If we look at institutions we have a mix of public and private, large and small. In terms of students, we have the same type of diversity, those who are attending full time versus part time, young versus those who are coming with work experience, international students versus U.S. students.

We do not have as much of a health diversity as we would like by any means in the representation by race and gender, as the remarks of the previous panel alluded to earlier this morning.

The second point is that financing is also very diverse. It's diverse in terms of types of aid, fellowships, teaching assistanceships, research assistanceships, self-help programs. It's also diverse with respect to the sources of aid, money coming from the universities, from the private sector, from State governments, from the Federal Government and from the students and their families. And this diversity of financing also varies across fields of study and institution and the students.

Our studies in the consortium and at Princeton lead us to think that we no longer have a healthy balance, that students and institutions are bearing an increasing share of the cost and it's an unhealthy share at present, as I tried to suggest in my written testimony.

We feel that the Federal Government, because of the spillover of benefits to the Nation and the broad, national perspective, is in a position to provide more in the way of financial encouragement, as well as just psychological encouragement, as a public signal that the Nation values this investment.

The third point is that the shifting pattern of graduate financial aid has dampened the enthusiasm for graduate study, as reflected in the declining numbers of applications, percentage submissions which we alluded to in the written remarks, and also as a point that Mr. Simon mentioned a few moments ago, we are concerned that the shifting pattern of financial aid is also deterring the more talented, the quality students, from pursuing graduate study.

We have evidence from work done from the Woodrow Wilson Foundation, the Mellon Foundation, our own internal work on the COFHE project, to suggest that, end impressionistic evidence which says that this deterrent effect is this strong and it's real.

In my own—if I close with a small example from Princeton, in last year's graduating class of 92 economics majors, a discipline which has a very good employment record and very high quality graduate education in this country, only 2 of the 92 seniors were going on for Ph.D. study in this country.

Ultimately, then, our concern is really twofold, that the best potential candidates in all fields, representing the full diversity of the American population, be encouraged and supported financially in the support of advanced learning, and that the departments receive the support they need to offer programs of quality. At this point in our history our national investment in graduate education seems not adequate in either respect.

Thank you.

STATEMENT OF DR. ALFRED SUSSMAN, DEAN OF GRADUATE SCHOOL, UNIVERSITY OF MICHIGAN

Dr. SUSSMAN. I am Alfred Sussman. I am vice president for graduate studies and research at the University of Michigan. I'd like to address the issues of unmet needs and loan debts, the effects of these matters upon the choice of students, and finally, talk about your recommendations.

We have studied the sources of graduate student support and compared these with the financial requirements faced by graduate students. And the data in my written testimony will, I think, give eloquent evidence of the fact that among our university there is a large amount of unmet needs.

Just to give a few examples, of the 20 graduate schools studied, only 8 could meet the needs that the students had for more than 50 percent of the financial burden imposed on them. Indeed, only one of the universities in this set was able to meet 80 percent of the need as diagnosed in the studies we've conducted. This is in contrast to 2 years ago when the same study was conducted in which a larger proportion of the need was possible.

At the University of Michigan, for example, in 1981–82, the average dollars required for a student was $9,307, and yet we could only provide about a third of that. Therefore, since 1979, many students have faced an all-too-familiar trend in funds, reductions in federally funded fellowships and research assistanceships having been offset by increases in loans. And we have heard testimony today about the amount of loans.

That this has been the case is shown in the results of a survey of graduating seniors which appears on the COFHE report, which will be left by Dr. Sanderson, called "Beyond the Baccalaureate." I won't expand on those data because they're there for you to see in that report. However, I should like to mention that in addition to these large debt burdens confronted by graduate students, the matter is exacerbated by our data which also show that parents are most likely to consider that their children who go on to graduate school, are independent and therefore are very likely to forego providing funds for that experience.

This is in contrast to the attitudes disclosed in our data where the parents are more likely to support their students when they go on to professional schools. This furtner affects the situation in respect to the choice of careers, a subject with which I'd like to deal now.

What are the effects of this situation upon the choices available to undergraduates who wish to undertake education beyond the baccalaureate?

Two-thirds of the seniors in private and public institutions considered attending graduate schools in the arts and sciences, but 31 percent of those in the private and about 40 percent in the public sector decided not to pursue graduate education.

Only 15 percent in the private schools and 12 percent in the publics of these groups of excellent students, planned to go directly into graduate school after graduation. The report found that among those in this set of B plus and A students, financial considerations were a strong factor in the decisionmaking process. This conclusion holds for all of the disciplines represented, which include the applied sciences, humanities, natural sciences, and social sciences.

Has there been a change over time in the career choices of excellent undergraduates who are headed for further education? Again, the data I have provided will reveal some situations in different universities. I have selected one from Northwestern University where a phi beta kappa candidate show that there has been a flight of the best students from Ph.D. programs.

This flight is illustrated in other cases as well and we have data from a number of the institutions within the COFHE group which reveal the same effect.

The results of the trends I have discussed are complex but all suggest that things are on the negative side of the ledger. Students with debts from their undergraduate years are choosing to pursue professional degrees which often take a shorter time to complete and which promise a higher payoff. Students who do enroll in graduate studies take longer to complete their work and, more often than professional students, drop out before taking their degrees.

Graduate work increasingly offers an unattractive option to such students. They are rational economic beings. They recognize these facts and say, "No, thank you," as they confront the situation that they see before them. And these are our most intelligent people who can read the facts better than most.

The cost to our society in terms of its cultural, economic, and technological basis may be very great if these tendencies continue. So, we must examine means to reverse this trend.

My colleagues have dealt with the subject of various forms of fellowship support, but I would like to center my attention on college work study, about which not much has been said, although it has been mentioned and supported by the persons who testified before us.

College work study is an excellent way to help lower the debt burden of students. Students prefer work to borrowing. The importance of the work, such as research and teaching, is patently obvious. And this work, in fact, is a working part of the graduate experience, and such Federal support contributes to increasing the supply of the experts upon whom we rely to enrich our culture, the knowledge base and technology.

We are aware that when the administration recently requested an additional $300 million in college work study funding, some were of the opinion that not all such increase could be utilized by eligible institutions. I would like to suggest that this may be true to an extent, but were a modest lead time to be built into the program, the increased funds could, indeed, be well used by the community and perform the important roles I discussed earlier.

In addition, given the changes that have occurred since the adoption of the allotment formula and regulation, the subcommittee might wish to consider reviewing these.

I would like to close with mention of something I mentioned earlier, and that has to do with the parents' obligation to students financially. As I showed earlier through the data which I think will be in the book that Dr. Sanderson has before him, it's likely that parents will not support their children in graduate school, whereas they willingly take the responsibility in the baccalaureate studies. This fact has, it seems to me, a very important effect upon the work study program that I mentioned earlier.

For example, the utility of the work study program is seriously undermined by the existing requirements for establishing financial independence. Currently a graduate student is bound by the same requirements that obtain for undergraduates. That is, to be declared independent a graduate student must not receive more than $750, be claimed as an income tax dependent, or live more than 6 weeks with his or her parents, both for the calendar year in which aid is received, and for the previous calendar year.

Quite apart from the fact that in a family oriented society this seems to me to divorce children even further from their families.

It seems to me that parents, generally, cannot, and as a matter of policy should not, be required to assume the same financial responsibility for their children's graduate education as for their undergraduate education. However, the current regulations would prevent students who were financially dependent as undergraduates from receiving need-based aid during their first year in graduate school. Even though the vast majority of such students are, in fact, totally independent.

I would, therefore, strongly urge that graduate students be considered financially independent upon enrollment in graduate school, provided they meet the criteria for independence from that time forward.

This opportunity to present the results of our research and to apply them to the important issues you raised is greatly appreciated. We stand ready to help you further, as your needs dictate.

Thank you.

Mr. SIMON. Thank you. Ms. Popik.

[Prepared statement of Roberta Popik follows:]

PREPARED STATEMENT OF ROBERTA S. POPIK, NORTHWESTERN UNIVERSITY

My name is Roberta Popik. I am Associate Director of Financial Aid at Northwestern University and manage the financial aid programs for our Medical, Dental and Law Schools. The purpose of my testimony is to discuss the implications for federal policy of debt management research conducted at Northwestern.

The basic question examined in our three-year research project was: based upon future earnings, what debt can we realistically expect a student borrower to manage as a result of postbaccalaureate studies? As a result of our research, we have developed a two-fold definition of manageable debt. Quantitatively, manageable debt is calculated by using that portion of annual discretionary income that remains after allowing for standardized living expenses according to the Bureau of Labor Statistics (BLS). Specifically, the portion of income available for educational loan repayment is identified as the BLS item "other family consumption." Qualitatively, manageable debt is defined in terms of an income-contingent concept that, first, allows for reasonable choices regarding career and school of preference and that, second, permits for choices regarding marriage, children, home-owning and other important life decisions.

The theoretical base of our model significantly departs from the traditional way of viewing student loan indebtedness. Traditionally, one first lends educational funds up to the level of student need, not exceeding federally-established annual and aggregate limits. Then, from this total principal amount, one derives a "manageable" monthly repayment stream, either fixed or increasing in size over time. From our perspective, this after-the-fact determination of manageable debt puts the cart before the horse. The only reasonable way to estimate manageable debt is to determine *first* what is a manageable repayment amount for any given year, based upon anticipated earnings within that year. Only then should one determine the total debt principal that could be repaid by such a stream of annual payments. In this way, the total educational debt is tied to a meaningful measure: annual earnings.

Based upon these underlying premises, a computer simulation model is used to project manageable levels of debt for students in our graduate and professional programs. Specific assumptions of the model are made for interest rate, in-school interest subsidy, repayment terms, income growth rates, and repayment assessment rates. The assumptions are fully outlined in the notes for Table 1 and are necessary for understanding the integrity of our projections.

Before describing the model, let me respond in advance to the possible objection that projections, which extend 15 or 20 years into the future, cannot deal with numerous unforeseeable contingencies. We agree. Estimates of manageable debt must be re-evaluated and re-assessed every three or four years, since changes in the economy, as well as regulations governing student aid programs, can significantly alter assumptions and the projected levels of manageable debt.

Our manageable debt model may be summarized in terms of four steps. First, adjusted gross incomes are derived from starting salary data and then increased, at assumed growth rates, over a 15-year repayment period. Second, adjusted gross incomes are converted to after-tax incomes, assuming itemized deductions. Third, the amount of income available for discretionary educational debt repayments is calculated by using BLS standard budgets as the base. Assuming that the "other family consumption" portion of the BLS budget is fully available for educational expenses, a progressive assessment schedule is applied to the after-tax income. The "other family consumption" item represents a portion of the discretionary income after an allowance has been made for reasonable living expenses. The result of the assessment is to establish a series of graduated repayments, in which increased debt repayments occur concomitantly with increases in income. An equal repayment scheme is also developed by assuming that the amount available during the fifth year of the graduated plan is manageable during each year of the equal plan. Fourth, a present value calculation is used to determine the total debt principal that would be supported by each repayment stream. This four-step process results in an estimate of manageable debt assuming the full subsidy of interest during the in-school period. However, if the in-school subsidy were to be eliminated, the capitalization of interest would reduce the loan amount available for educational expenses.[*]

The results of our research for the class graduating Northwestern in 1984 are shown in Table 1. The table shows several items of information: starting salary data; manageable debt levels under four alternative repayment schemes--three assuming an in-school interest subsidy (10-year equal, 15-year equal and graduated) and one assuming no subsidy of interest during the in-school period (15-year graduated); and an estimate of the percentage of adjusted gross income available for educational debt repayments. It is important to keep in mind when reviewing the manageable debt levels that these reflect total educational debt, including both undergraduate and graduate borrowing.

Our main research finding that can be generalized to the student population as a whole is a numerical measure of manageable debt repayment--between 7.5 and 4.6 percent of adjusted gross income, with the higher percentage reflecting the higher end of the income scale. When this measure is applied to Northwestern's graduate and professional students, it becomes clear that many are already exceeding manageable debt and that others will do so as educational costs continue to rise. For example, the average debt at graduation for our students who entered in 1982 is projected to exceed $25,000 in three of our programs (refer to Table 2). Individual burdens in some cases may be far in excess of the average. Examining individual cases, we project the maximum debt at graduation for some students to exceed $92,000 in Medicine, $87,000 in Dentistry, $50,000 in Law, $25,000 in Music and $20,000 in Journalism.

Given other recent research (e.g., Flamer, Horch and Davis, 1982; Hartle and Wabnick, 1983) that indicates the trend toward significantly increased debt at both the undergraduate and the graduate levels in the public as well as the private sector, the implications of this finding are not limited to private, high-cost universities like Northwestern. For example, if one assumes that the average educational costs for graduate or professional programs at a flagship state university are approximately half the costs at Northwestern, then public sector graduate students borrowing about 70 percent of their costs are already approaching the limits of manageable debt under a 10-year equal repayment plan. If one assumes that these students have already borrowed the average amount as undergraduates, then in at least some cases for public sector students, manageable debt is being exceeded.

New educational loan policies should be responsive to two serious implications of our research findings. First, if large numbers of students borrow in excess of manageable debt levels, then difficulty with repayment will cause increased costs to the government as a result of rising default rates. Second, and more important, high student indebtedness will limit access and choice with regard to graduate and professional education at a time when our nation is calling for a return to individual scholarship and excellence.

The concept of income-referenced debt has several implications for the structure of existing loan programs, both in terms of their front-end mechanisms, such as the loan subsidy and borrowing limits, as well as their back-end repayment processes, such as loan consolidation and income-contingent repayment. I would like to address briefly each of these issues.

1. The in-school interest subsidy should be maintained for graduate and professional students as well as undergraduate students. Our research shows that if interest is accrued and compounded during the in-school period, rather than subsidized, then the amount that may be loaned to a student is greatly reduced. This may be seen on Table 1 by comparing the manageable debt levels projected for the 15-year graduated repayment plan under the subsidized and capitalized examples.

2. The borrowing limits on the Guaranteed Student Loan Program should be increased for graduate and professional students. Although it may not be intuitively obvious, we recommend raising the GSL limit to $10,000 per year. One of the main reasons that graduate students are now approaching the limits of manageable debt is because of the standard 10-year, equal repayment plan. If this problem can be addressed, then higher limits can

be justified on two grounds. First, educational costs have been increasing at a much faster rate than available financial aid. Second, our research shows that there is a gap between available loan funds and manageable debt under an appropriately designed, flexible, extended repayment plan.

Using the PLUS/ALAS Program as the mechanism for providing access to additional funds is not as effective as increasing the GSL limits. First, since PLUS/ALAS loans have a non-subsidized, 12 percent interest rate, they will have a disproportionate effect on total indebtedness by requiring larger repayments relative to loan principal. Second, the need for increased GSL limits is in response to unmet need and is not intended to provide additional funding for loans of convenience.

3. Flexible repayment options, with loan consolidation, should be standard. Longer, graduated repayment plans will allow manageable repayment of higher debt levels. Our research clearly shows a significant increase in manageable debt principals if the debt repayment plan is based upon graduated rather than equal repayments and if the period is extended from 10 to 15 years. At lower levels of debt, a 10-year plan is feasible. However, at higher debt levels, a 15-year plan, with an option for consolidation, is necessary.

It is critical to note the relative nature of "high debt." Students entering low-income professions such as teaching or other service-related areas may earn no more than the $14,250 starting salary projected for Northwestern's future music teachers. Assuming that the students carried an undergraduate debt of $4,500 into their professional school educations, a single GSL of $5,000 would create hardship unless a 15-year graduated plan were used. Any other option may lead to default.

Many students borrowing at the higher levels receive loans from multiple sources. Loan consolidation, by combining the sources into a single repayment with a longer term, is the key variable that allows such debt to be managed. Extension of consolidation to other loan sources currently not available, such as HEAL and HPSL, would be a significant help in the high-cost, high-debt health professions areas.

4. An income-contingent repayment program, with a loan forgiveness provision, should be developed. Such a program is necessary because of the national need to attract talented individuals into lower-income, public-service professions, especially at this time when our society is encouraging students to enter teaching and research careers in order to maintain the excellence of our educational and social systems. However, our research indicates that students who choose these careers will not be able to repay the same levels of debt as those who choose careers in the private sector.

There are two ways of approaching this problem. One would be to limit, in advance, borrowing by profession. However, since this approach would involve significant restructuring of the loan programs, as well as early career decisions by students, it is not a desirable option. The second and viable approach would be to develop a program in which annual repayment is tied to income, with a provision for loan forgiveness. Our research indicates that students can pay between 4.6 and 7.5 percent of their annual adjusted gross incomes toward educational debt. Borrowers who could not meet their total obligation by graduated payments over a 15-year period, because of either lower-than-average incomes or borrowing in excess of manageable levels, would have their remaining debt forgiven. In effect, these students would receive a deferred, non-taxable scholarship from the federal government. A system to verify student income would be required for such a plan to work effectively.

An income-contingent repayment program, with a loan forgiveness provision, has the advantage of protecting students entering lower paying professions as well as recognizing differences in career choice within profession. It would encourage students to enter the teaching and research professions as well as other public-service fields.

In conclusion, it is important to keep in mind that our research findings are not limited to graduates of Northwestern University. Since debt is indexed to starting salary, the projections of manageable debt are appropriate for any student (undergraduate, graduate or professional), attending any institution (public or private), who anticipates an earnings capacity similar to one used as the base for our research.

Table 1. Manageable Educational Debt*

School/ Program	1983 Starting Salary	-----Subsidized Interest--- 10-Year Equal	15-Year Equal	15-Year Graduated	Capitalized Interest 15-Year Graduated	Average Debt Repayment as % of Adjusted Gross Income
Music/Teaching	$14,250	$ 6,756	$ 8,438	$ 9,745	$ 8,202	4.6 %
Journalism/Editorial	14,500	6,901	8,619	9,960	9,138	4.7
Journalism/Advertising	20,000	10,828	13,524	15,606	14,317	5.3
Music/Performance	24,960	15,479	19,333	22,230	18,711	6.0
Management	31,685	21,663	27,056	31,079	26,159	6.6
Law	34,000	23,748	29,660	34,065	26,304	6.8
Dentistry	48,157 **	31,453	42,856	46,247	32,763	7.4
Medicine	54,550 **	44,000	54,000	62,000	41,894	7.5

*Manageable educational debts are for the class graduating 1984 with full assumptions as noted on the following page.

**The Dental and Medical starting salaries are practice income, after the student has completed an initial low earning period for either an associateship or residency. The lower-income years are fully considered in the model.

Notes to Table 1

1. An interest rate of nine percent on all educational loans is assumed.

2. The interest is assumed to be either fully subsidized during the in-school period or capitalized (accrued and compounded). In either case, repayment of principal and interest begins six months after graduation. The only exception to this assumption is for Medicine which received special treatment with regard to the repayment of principal and interest to accommodate the years in residency. Repayment of principal was fully deferred until after a three-year residency period. Interest payments during residency were applied in one of two ways. If in-school interest was subsidized, then during the residency the annual interest payments were in the amount of 5.5 percent of adjusted gross income, with the remainder capitalized. If in-school interest was capitalized, then all interest during the residency period was capitalized also. In either case, full principal and interest payments began after the third year of residency.

3. Manageable debt principals are reported for an assumed eight percent growth in income. This represents a two percent increase in real income added to an assumed inflation rate of six percent.

4. The entire amount of discretionary after-tax income, as derived from BLS standard budgets, is considered available to meet deferred educational expenses incurred through loans.

5. The 1983 annual incomes were derived for students graduating from professional schools at Northwestern University. However, these data may be generalized and the starting salaries may be viewed as representing low, intermediate, high and very high income ranges for students graduating from any undergraduate, graduate or professional program of study. When making such comparisons, the length of the educational program and the first year that repayment begins must be taken into account.

6. The manageable debt principals represent total manageable educational debt, including that for both undergraduate and graduate studies.

Table 2. Northwestern University Average Projected Total Debt Levels

School/Program	Program Length (Years)	Average Total Debt
Dentistry	4	$56,942
Journalism		
Advertising	1	13,918
Editorial	1	12,904
Law	3	33,557
Management	2	21,125
Medicine	4	70,284
Music		
Performance	1	9,364
Teaching	1	10,212

Assumptions

1. Data reported for classes entering 1982 (Journalism, 1983), graduating between 1983 and 1986.
2. Average total debt includes both actual undergraduate debt and projected professional level debt.
3. Only students with need-based professional-level loans in excess of a $5,000 FISL/GSL annually were included.

REFERENCES

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STATEMENT OF ROBERTA POPIK, ASSOCIATE DIRECTOR FOR FINANCIAL AID, NORTHWESTERN UNIVERSITY

Ms. Popik. Thank you. My name is Roberta Popik. I am associate director of financial aid at Northwestern University and I'm responsible for managing the financial aid programs for our medical, dental, and law schools.

The purpose of my testimony today is to discuss the implications for Federal policy of debt management research we have conducted at Northwestern over the past 3 years.

As a result of our research, we have developed a twofold definition of manageable debt. Quantitatively, manageable debt is calculated by determining that portion of discretionary annual income which is available after standardized allowances have been made, according to the Bureau of Labor Statistics, for living expenses.

Specifically, that portion of the BLS budget identified as "other family consumption" is recognized as being available for educational debt repayment.

Qualitatively, manageable debt is an income contingent concept which recognizes first that students can make reasonable choices in terms of career and in terms of school preference and that recognizes, second, that students can make reasonable choices in terms of their future family, children, homeowning, and other important life decisions.

Our main research finding that can be generalized to the student population as a whole is a numerical measure of manageable debt, namely from 7.5 to 4.6 percent of annual adjusted gross income, with a higher percentage reflecting the higher income levels. When this measure is applied to students attending Northwestern University, we find that students are already exceeding the boundaries of manageable borrowing, and as educational costs continue to rise, we anticipate that more students will do so in the future.

Given other research that shows trends toward increased undergraduate, graduate, and professional borrowing in the public and the private sectors, it becomes clear that the implications of our finding are not limited to students who attend high cost private institutions like Northwestern. For example, if you assume that a student attending a flagship State university, who has costs of half that of Northwestern, and who borrows to meet 70 percent of their cost, then some of those students, at least, are already borrowing near manageable levels, and if you further assume that these students are bringing with them the average amount of undergraduate debt into their graduate and professional education, then there are some students, at least in the public sector, who are already borrowing in excess of manageable levels of debt.

There are two implications of our finding for Federal policy in the general level. First, if students continue to borrow in excess of manageable levels, or if more students borrow in excess of manageable levels, then increased default rates as students have problems with repayments, will provide increased costs to the Federal Government.

Second, and perhaps more important, unmanageable debt will limit access and choice to graduate and professional education at a time when our Nation is calling for a return to individual scholarship and excellence.

The concept of income referenced debt has several implications for our Federal loan programs, both in terms of their up-front mechanisms such as the interest subsidy and borrowing limits, as well as their back end mechanisms such as loan consolidation and income-contingent repayment. And I would like to address briefly now some of our perceptions at Northwestern University as to what the implications of our research are.

First, the in-school interest subsidy should be maintained for graduate and professional students as well as for undergraduate students. Our research clearly shows that if the in-school interest is accrued and compounded rather than subsidized, that the amount of money which a student can manage to repay is significantly reduced.

Second, the borrowing limits on the guaranteed student loan program should be increased for graduate and professional students. Although it does not seem intuitively obvious, we recommend that the annual limits on the guaranteed student loan program be raised to $10,000 per year for graduate and professional students. The reason that so many students are approaching the limits of manageable debt is because of the 10-year equal repayment plan. If that problem is taken care of and addressed, then students will be able to afford borrowing to higher levels through the guaranteed student loan program, for two reasons.

First, because costs are increasing at a faster rate than available financial assistance, and this is especially true at the graduate and professional level. Second, because our research shows that there is a gap between current maximum loan limits and manageable debt, as projected by our research. So, students can borrow to fill that gap.

Third, students should have flexible repayment plans with loan consolidation and these should become standard. Loan debts can be manageable if the appropriate repayment terms are available, and we recommend that at the higher debt levels graduated repayment plans with options for consolidation be made available, continue to be made available.

At low levels of debt, a 10-year equal repayment plan may be feasible. However, at higher levels of debt a 15-year plan with graduated repayments is required.

Fourth, an income contingent loan repayment plan with a provision for loan forgiveness should be developed. There is a need for a program such as this because of our national need to attract talented students into lower income public service professions such as teaching and research.

Our research shows, however, that such students cannot afford the same level of debt as students who go into occupations in the private sector. We recommend, therefore, that loan repayments be tied to income so that such payments can be manageable, recommend that over a 15-year period students' debt gets paid, tied to their annual adjusted gross income, and that if because of higher than average borrowing or borrowing in excess of manageable levels or if because of lower than anticipated incomes, these students cannot meet their total repayments, then their debt be forgiven.

In conclusion, I would like to say that the results of our research are not limited to students who graduate from Northwestern University. Because our research ties manageable debt to salary as its index, our data can be generalized to a degree to all students, undergraduate, graduate, and professional, who attend both public and private institutions.

I thank you for your attention. I would like to make available to the committee a full copy of our research report so it can be studied in detail, and I'd be pleased to answer any questions.

[The research report follows:]

Northwestern University
8/21/83

A MODEL FOR ESTIMATING MANAGEABLE DEBT PRINCIPALS

A computer simulation model is used to project manageable levels of debt for students in graduate and professional programs at Northwestern University. Manageable debt is a function of anticipated future earnings. The procedures of the model are fully described in Appendix 1. The following highlights key assumptions of the model.

... An interest rate of 9 percent on all educational loans was assumed.

... The interest was assumed to be either fully subsidized during the in-school period or capitalized (accrued and compounded). Tables are clearly labelled as to which assumption is appropriate. In either case, repayment of principal and interest begins six months after graduation. The only exception to this assumption is for Medicine which received special treatment with regard to the repayment of principal and interest to accommodate the years in residency. Repayment of principal was fully deferred until after a three-year residency period. Interest payments during residency were applied in one of two ways: partial or full capitalization. In the partially capitalized interest examples, the annual interest payments applied during residency were in the amount of 5.5 percent of adjusted gross income, with the remainder capitalized. In the fully capitalized interest examples, all interest during the residency period was capitalized. In both examples, full principal and interest payments began after the third year of residency.

... Manageable debt principals are reported for three levels of income growth: 6, 8, and 10 percent. Each growth rate represents a 2 percent increase in real income added to an assumed inflation rate of 4, 6, or 8 percent.

... The entire amount of discretionary after-tax income, as derived from BLS standard budgets, is considered available to meet deferred educational expenses incurred through loans.

... The 1983 annual incomes were derived for students graduating from professional schools at Northwestern University. However, these data may be generalized and the starting salaries may be viewed as representing low, intermediate, high and very high income ranges for students graduating from any undergraduate, graduate, or professional program of study. When making such comparisons, the length of the educational program and the first year that repayment begins must be taken into account.

... The manageable debt principals represent total manageable educational debt, including that for both undergraduate and graduate studies.

The manageable debt principals are empirically-derived estimates based upon a set of fixed but reasonable assumptions. The results should be viewed in that context. The derivations reflect maximum manageable educational debt since the entire amount of discretionary after-tax income (other family consumption) is assumed to be available for educational loans. However, by changing the salary and interest rate assumptions, projected debt capability can be increased. For example, the income levels which are the foundation of the debt projections may be low for students working in some major metropolitan areas and the estimates of available discretionary income may therefore be underestimated. Similarly, the assumption of 9 percent interest on all educational loans may minimize debt capability if students are borrowing significant amounts from lower interest loan programs (e.g., NDSL at 3, 4, or 5 percent; GSL at 7 or 9 percent; Northwestern Parent/Student Loans currently at 8 percent). However, if students are borrowing from higher interest programs (ALAS at 12 percent; HEAL currently at 11 3/4 percent), then the reported debt levels may be excessive. In sum, the model should be viewed as being elastic, and the debt levels interpreted with a full understanding of the model's assumptions and the parameters describing an individual student's debt load.

RESULTS AND DISCUSSION

Manageable educational debt, for a 15-year graduated repayment plan, at 6, 8, and 10 percent increases in income, is shown in Tables 1 and 2. The two tables differ with regard to the treatment of in-school interest payments, showing the fully subsidized and fully capitalized examples, respectively. The 1983 starting salaries from which the debt principals were derived are also shown in the tables.

It is important to note the distinction between Tables 1 and 2. The debt principals in Table 1 are maximum total debt principals. If these amounts were actually loaned to students, then it must be assumed that the interest is either fully subsidized by the schools or completely paid by the students during the in-school period. If the interest is capitalized during the in-school period, the amount which may be loaned to a student for educational purposes is significantly reduced, as shown in Table 2. The total amount of debt principal which a student borrows is the same under the fully subsidized and fully capitalized examples. Under the fully capitalized example, the amount available for educational purposes is reduced to accommodate the interest add-on.

The percentage of adjusted gross income which is used for educational debt repayment is also shown on Tables 1 and 2. As would be expected, there is a direct relationship between annual repayments and income -- the higher the income, the larger the percentage of income which can be used toward repayment. The percentages range from 4.6 percent for the lowest income program (Music/Teaching) to 7.5 percent in the highest income program (Medicine). The percentage of adjusted gross income used for repayment is the same for the fully subsidized and fully capitalized examples because the total maximum debt principal is not affected by the varied treatment of interest.

An example of the partial payment of interest during the three-year residency period for Medical students is shown in Table 3. The annual amount paid was derived at 5.5 percent of adjusted gross income, with the remaining interest capitalized. A 5.5 percent rate was used because the income during the residency period falls within the intermediate income range as defined by the Bureau of Labor Statistics standard budgets. As shown in Tables 1 and 2, a 5.5 assessment rate is reasonable for incomes at this level. The examples in Table 3 again show the dramatic effect on maximum educational borrowing when interest is not fully subsidized or paid during the deferment period.

A full presentation of manageable educational debt levels as a function of income growth rates and the treatment of in-school interest payments is shown in Tables 4 through 9. Debt levels are shown for four repayment plans: 10 or 15 years, equal or graduated. Levels are presented for each class which will be in attendance at Northwestern University during the 1983-84 academic year.

In general, the graduated repayment plan results in higher manageable educational debt levels than the equal repayment plan. The effect is accentuated over a 15-year repayment stream. The lower debt levels in the equal plan can be accounted for by the method used to determine annual repayments.

The annual amount of repayments in the equal plan was fixed at the amount paid during the fifth year of graduated repayments. The fifth year, as the middle year of a 10-year repayment stream, was selected as representing a reasonable estimate of manageable repayments. Since the fifth year is, in fact, slightly less than the midpoint of the 10-year repayment stream, it weights the equal repayment model at a slightly lower value than if the true midpoint had been used. This accounts for the lower debt levels in the equal plan. This weighting has an even greater effect when extended over 15 years.

An exception to this trend is observed for Dentistry when examining the 10-year repayment stream. In that case, the manageable debt for the 10-year equal plan exceeds that for the graduated plan. This is due to the income shift incorporated into the Dentistry projections which assumes the first four years of repayment to be at a lower salary than the last six years. To accommodate the income shift, equal repayments were defined twice, first by the third year and then by the eighth year of the graduated plan. Since a payment occurring significantly later than the fifth year was selected, the equal repayments are weighted toward a higher value, and total debt for the 10-year equal plan exceeds the projected debt for the graduated 10-year repayment plan.

Table 1: Manageable Educational Debt as Related to Starting Salaries and Income Growth Rates

Fully Subsidized Interest

Assumptions:
1. Class graduating 1984.
2. 15-year graduated repayments.
3. 9 percent interest rate on loans.
4. Interest fully subsidized during in-school period.
5. Annual interest payment during 3-year Medical residency equal to 5.5 percent of adjusted gross income.

		Manageable Debt Levels at Various Rates of Income Growth			
School/Program	1983 Starting Salaries	6%	8%	10%	Annual Debt Repayment as % of Adjusted Gross Income*
Dentistry	$30,000/ 48,157	$40,510	$46,247	$52,818	6.9%/** 7.4
Journalism					
Advertising	20,000	14,137	15,606	17,525	5.3
Editorial	14,500	8,994	9,960	11,238	4.7
Law	34,000	30,754	34,065	38,085	6.8
Management	31,685	27,887	31,079	34,618	6.6
Medicine	19,809/ 54,550	53,000	62,000	74,000	0/5.5*** 7.5
Music					
Performance	24,960	20,286	22,230	24,262	6.0
Teaching	14,250	8,768	9,745	10,989	4.6

Note. Table reads as follows: assuming a starting salary (adjusted gross income) of $20,000 for advertising majors in Journalism, at a 6 percent growth rate in income, the manageable debt level would be $14,137. Annual repayments represent 5.3 percent of adjusted gross income.

Refer to Appendix 1, "Notes for Table 1," for derivation of starting salaries.

Also, refer to "Notes for Tables 1 and 2" on page 6.

Table 2: Capitalized Educational Debt as Related to Starting Salaries and Income Growth Rates

Fully Capitalized Interest

Assumptions:
1. Class graduating 1984.
2. 15-year graduated repayments.
3. 9 percent interest rate on loans.
4. Interest fully subsidized during in-school and Medical residency periods.

		Capitalized Debt Levels at Various Rates of Income Growth			
School/Program	1983 Starting Salaries	6%	8%	10%	Annual Debt Repayment as % of Adjusted Gross Income*
Dentistry	$30,000/ 48,157	$28,698	$32,763	$37,418	6.9%/** 7.4
Journalism					
Advertising	20,000	12,970	14,317	16,078	5.3
Editorial	14,500	8,251	9,138	10,310	4.7
Law	34,000	23,748	26,304	29,409	6.8
Management	31,685	23,472	26,159	29,137	6.6
Medicine	19,809/ 54,550	34,980	41,894	50,220	0/5.5/*** 7.5
Music					
Performance	24,960	17,074	18,711	20,421	6.0
Teaching	14,250	7,380	8,202	9,249	4.6

Note. Table reads as follows: assuming a starting salary (adjusted gross income) of $20,000 for advertising majors in Journalism, at a 6 percent growth rate in income, the manageable debt level would be $14,137. Annual repayments represent 5.3 percent of adjusted gross income.

Refer to Appendix 1, "Notes for Table 1," for derivation of starting salaries.

Also, refer to "Notes for Tables 1 and 2" on page 6.

Notes for Tables 1 and 2.

* Annual repayments as a percentage of adjusted gross income vary from year to year, decreasing slightly, but steadily, over the course of a 15-year repayment stream. The percentage figures reflect the average percentage over 15 years. For example, for the Law School class entering in 1983, 8 percent increases in income, the annual graduated repayment in 1987 is $3,126, assuming an annual adjusted gross income of $44,543. At the end of 15 years, in year 2001, the annual graduated repayment is $8,608, with an annual income of $130,833. Repayments represent 7.018 and 6.579 percent of adjusted gross income, respectively. The 6.8 percent figure reported on Tables 1 and 2 represents the average over the 15 years.

The percentage remains relatively constant for different years of graduation because of the growth of both income and the amount of repayment.

** The Dentistry/Associateship repayment percentage is greater than that for Law and Management, even though its annual income is lower. This is due to the fact that the associateship repayment period is for four years, whereas the other programs' repayment streams are for a full 15 years. Dentistry, therefore, does not exhibit as strong an effect of the steady decline described above.

*** For the fully subsidized example, 5.5 percent of adjusted gross income goes toward interest payments. For the fully capitalized example, no interest payments are made during residency.

Table 3: Interest Examples for Medical Students

Partial Capitalized Interest During Residency

Assumptions:

1. Full subsidy of interest during the in-school period.
2. Length of residency equals three years.
3. Annual interest payments during residency equal 5.5 percent of adjusted gross income.
4. Principal is fully deferred during the in-school and residency periods.
5. Loans at 9 percent interest.
6. 1983 residency salaries: first-year $19,809; second-year, $20,797; third-year, $21,539. Salaries increased at actually-observed rate of 5 percent.
7. Income during practice years increased at 8 percent.
8. Class entering 1981, graduating 1985.

A. 15-year graduated repayments

Maximum Educational Loans = $67,000*

Maximum Total Debt = $82,717**

Year	Income	5.5% Payment	Actual Interest	Amount Capitalized	Principal Balance
					$67,000
1986	$22,931	$1,261	$6,030	$4,769	71,769
1987	25,279	1,390	6,459	5,069	76,838
1988	27,490	1,512	6,915	5,403	82,241

B. 15-year equal repayments

Maximum Educational Loans = $59,000*

Maximum Total Debt = $71,571**

Year	Income	5.5% Payment	Actual Interest	Amount Capitalized	Principal Balance
					$59,000
1986	$22,931	$1,261	$5,310	$4,049	63,049
1987	25,279	1,390	5,674	4,284	67,333
1988	27,490	1,512	6,060	4,548	71,881

* Principal balance of educational loans upon entering residency.

** Total debt includes educational loans plus interest capitalized during three-year residency period.

Table 4: Manageable Educational Debt

6 Percent Increase in Income, Fully Subsidized Interest*

Graduated Repayments

School/ Program	Program Length	10 Years Year of Graduation 1984	1985	1986	1987	15 Years Year of Graduation 1984	1985	1986	1987
Dentistry	4	$27,507	$29,059	$30,874	$32,728	$40,510	$42,784	$45,411	$48,125
Journalism									
Advertising	1	10,220				14,137			
Editorial	1	6,495				8,994			
Law	3	22,277	23,598	25,020		30,754	32,576	34,543	
Management	2	20,199	21,395			27,887	29,538		
Medicine*	4	39,000	41,000	44,000	46,000	53,000	56,000	59,000	62,000
Music									
Performance	2	14,677	15,552			20,286	21,494		
Teaching	2	6,332	6,707			8,768	9,287		

Equal Repayments

	10 Years Year of Graduation 1984	1985	1986	1987	15 Years Year of Graduation 1984	1985	1986	1987
Dentistry	$28,493	$30,116	$32,030	$33,880	$38,512	$40,700	$43,241	$45,755
Journalism								
Advertising	10,315				12,883			
Editorial	6,539				8,167			
Law	22,439	23,597	25,011		28,025	29,471	31,238	
Management	20,354	21,393			25,421	26,719		
Medicine*	39,000	41,000	44,000	46,000	48,000	51,000	54,000	57,000
Music								
Performance	14,802	15,545			18,486	19,415		
Teaching	6,381	6,703			7,970	8,372		

* During the three-year Medical residency period, annual interest payments are made up to a maximum of 5.5 percent of adjusted gross income. The remainder of the interest is capitalized (refer to Table 3 for an example). Payment of principal is deferred.

Table 5: Capitalized Educational Debt

6 Percent Increase in Income, Fully Capitalized Interest*

Graduated Repayments

Program	Length	10 Years Year of Graduation 1984	1985	1986	1987	15 Years Year of Graduation 1984	1985	1986	1987
Dentistry	4	$19,487	$20,586	$21,872	$23,185	$28,698	$30,309	$32,170	$34,093
Journalism									
Advertising	1	9,376				12,970			
Editorial	1	5,959				8,251			
Law	3	17,202	18,222	19,320		23,748	25,155	26,674	
Management	2	17,000	18,008			23,472	24,862		
Medicine*	4	25,357	26,870	28,417	30,102	34,980	37,073	39,205	41,529
Music									
Performance	2	12,353	13,090			17,074	18,091		
Teaching	2	5,330	5,645			7,380	7,817		

Equal Repayments

	10 Years Year of Graduation 1984	1985	1986	1987	15 Years Year of Graduation 1984	1985	1986	1987
Dentistry	$20,185	$21,335	$22,691	$24,001	$27,283	$28,833	$30,633	$32,414
Journalism								
Advertising	9,463				11,819			
Editorial	5,999				7,493			
Law	17,327	18,221	19,313		21,640	22,757	24,121	
Management	17,132	18,006			21,396	22,489		
Medicine*	25,370	26,889	28,451	30,139	31,686	33,583	35,534	37,641
Music								
Performance	12,459	13,084			15,559	16,341		
Teaching	5,371	5,642			6,708	7,047		

* For medicine, interest is not only capitalized during the in-school period but during the three-year residency as well. Payment of principal is deferred.

OPY

Table 6: Manageable Educational Debt

8 Percent Increase in Income, Fully Subsidized Interest*

Graduated Repayments

Program	Length	10 Years, Year of Graduation 1984	1985	1986	1987	15 Years, Year of Graduation 1984	1985	1986	1987
Dentistry	4	$30,048	$32,332	$35,010	$37,822	$46,247	$49,742	$53,801	$58,103
Journalism									
Advertising	1	10,816				15,606			
Editorial	1	6,898				9,960			
Law	3	23,689	25,574	27,635		34,065	36,774	39,744	
Management	2	21,605	23,323			31,079	33,550		
Medicine*	4	44,000	48,000	52,000	56,000	62,000	67,000	72,000	78,000
Music									
Performance	2	15,431	16,662			22,230	24,005		
Teaching	2	6,749	7,280			9,745	10,512		

Equal Repayments

	10 Years, Year of Graduation 1984	1985	1986	1987	15 Years, Year of Graduation 1984	1985	1986	1987
Dentistry	$31,453	$33,862	$36,701	$39,568	$42,856	$46,129	$49,942	$53,858
Journalism								
Advertising	10,828				13,524			
Editorial	6,901				8,619			
Law	23,748	25,439	27,478		29,660	31,772	34,319	
Management	21,663	23,196			27,056	28,970		
Medicine*	44,000	48,000	51,000	55,000	54,000	59,000	63,000	68,000
Music								
Performance	15,479	16,565			19,333	20,688		
Teaching	6,756	7,236			8,438	9,038		

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* During the three-year Medical residency period, annual interest payments are made up to a maximum of 5.5 percent of adjusted gross income. The remainder of the interest is capitalized (refer to Table 3 for an example). Payment of principal is deferred.

Table 7: Capitalized Educational Debt

8 Percent Increase in Income, Fully Capitalized Interest*

Graduated Repayments

School/ Program	Program Length	10 Years Year of Graduation 1984	1985	1986	1987	15 Years Year of Graduation 1984	1985	1986	1987
Dentistry	4	$21,287	$22,905	$24,802	$26,794	$32,763	$35,238	$38,114	$41,162
Journalism									
Advertising	1	9,923				14,317			
Editorial	1	6,328				9,138			
Law	3	18,292	19,748	21,339		26,304	28,396	30,690	
Management	2	18,184	19,631			26,159	28,238		
Medicine*	4	29,162	31,492	33,929	36,623	41,894	45,249	48,746	52,616
Music									
Performance	2	12,988	14,024			18,711	20,205		
Teaching	2	5,680	6,127			8,202	8,848		

Equal Repayments

	10 Years Year of Graduation 1984	1985	1986	1987	15 Years Year of Graduation 1984	1985	1986	1987
Dentistry	$22,282	$23,989	$26,000	$28,031	$30,360	$32,679	$35,3[illegible]	$38,154
Journalism								
Advertising	9,934				12,407			
Editorial	6,331				7,907			
Law	18,338	19,644	21,218		22,903	24,534	26,501	
Management	18,233	19,524			22,772	24,383		
Medicine*	29,023	31,348	33,791	36,472	36,248	39,152	42,203	45,552
Music								
Performance	13,028	13,942			16,272	17,413		
Teaching	5,686	6,090			7,102	7,607		

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* For medicine, interest is not only capitalized during the in-school period, but during the three-year residency as well. Payment of principal is deferred.

OPY

Table 8: Manageable Educational Debt

10 Percent Increase in Income, Fully Subsidized Interest*

Graduated Repayments

School/ Program	Program Length	10 Years Year of Graduation 1984	1985	1986	1987	15 Years Year of Graduation 1984	1985	1986	1987
Dentistry	4	$32,760	$35,890	$39,599	$43,589	$52,818	$57,833	$63,724	$70,113
Journalism									
Advertising	1	11,620				17,525			
Editorial	1	7,445				11,238			
Law	3	25,347	27,882	30,701		38,085	41,891	46,136	
Management	2	23,032	25,336			34,618	38,080		
Medicine*	4	51,000	55,000	61,000	67,000	74,000	81,000	89,000	98,000
Music									
Performance	2	16,112	17,731			24,262	26,700		
Teaching	2	7,279	7,999			10,989	12,074		

Equal Repayments

	10 Years Year of Graduation 1984	1985	1986	1987	15 Years Year of Graduation 1984	1985	1986	1987
Dentistry	$34,606	$37,932	$41,892	$46,023	$47,507	$52,064	$57,429	$63,105
Journalism								
Advertising	11,545				14,419			
Editorial	7,394				9,235			
Law	25,215	27,511	30,287		31,492	34,360	37,827	
Management	22,913	24,998			28,617	31,221		
Medicine*	50,000	55,000	60,000	66,000	62,000	68,000	74,000	81,000
Music								
Performance	16,038	17,486			20,031	21,838		
Teaching	7,230	7,888			9,030	9,851		

* During the three-year Medical residency period, annual interest payments are made up to a maximum of 5.5 percent of adjusted gross income. The remainder of the interest is capitalized (refer to Table 3 for an example). Payment of principal is deferred.

Table 9: Capitalized Educational Debt

10 Percent Increase in Income, Fully Capitalized Interest*

Graduated Repayments

School/ Program	Program Length	10 Years Year of Graduation 1984	1985	1986	1987	15 Years Year of Graduation 1984	1985	1986	1987
Dentistry	4	$23,208	$25,425	$28,053	$30,880	$37,418	$40,970	$45,144	$49,670
Journalism									
Advertising	1	10,661				16,078			
Editorial	1	6,830				10,310			
Law	3	19,573	21,530	23,707		29,409	32,348	35,625	
Management	2	19,386	21,325			29,137	32,051		
Medicine*	4	33,481	36,838	40,418	44,443	50,220	55,266	60,627	66,665
Music									
Performance	2	13,561	14,924			20,421	22,473		
Teaching	2	6,127	6,733			9,249	10,162		

Equal Repayments

	10 Years Year of Graduation 1984	1985	1986	1987	15 Years Year of Graduation 1984	1985	1986	1987
Dentistry	$24,516	$26,872	$29,677	$32,604	$33,655	$36,883	$40,684	$44,705
Journalism								
Advertising	10,592				13,228			
Editorial	6,783				8,472			
Law	19,471	21,244	23,387		24,318	26,532	29,209	
Management	19,285	21,040			24,086	26,278		
Medicine*	33,061	36,382	39,938	43,914	41,291	45,439	49,880	54,846
Music								
Performance	13,499	14,718			16,860	18,381		
Teaching	6,085	6,639			7,600	8,291		

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* For medicine, interest is not only capitalized during the in-school period but during the three-year residency as well. Payment of principal is deferred.

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Northwestern University
8/21/83

A MODEL FOR ESTIMATING MANAGEABLE DEBT PRINCIPALS

APPENDIX 1: METHOD AND COMPARISON OF 1981 AND 1983 VERSIONS OF MODEL

The basic structure of the current 1983 version of the model is unchanged from the earlier 1981 version. Starting salary figures were revised based upon new information and, in the cases of Medicine and Dentistry, the treatment of residency and associateship periods was changed.

For Dentistry, a new approach was used to approximate the actual experience of practicing dentists. Information provided by the Dental School and the American Dental Association indicated that graduates of Dental programs generally go through a period of associateship (about four years long) at a relatively low salary, and then move into a full practice or other professional arrangement which provides a much higher income. Therefore, the model was adjusted to allow for this shift in income level.

Medical residents do not begin loan repayment until after a three-year residency period. The model was adjusted to delay repayment until after the seven-year in-school and residency period. At that time doctors would begin earning the estimated starting practice income and would begin a 10 or 15-year repayment period. The earlier version of the model assumed a four-year residency, with repayment of principal and interest occurring in the third and fourth years followed by an eight or 13-year repayment period during the practice years.

The results of the 1983 version of the manageable debt principals model are presented in Tables 1 and 2. Table 1 clearly shows that with two exceptions (Management and Music) actual annual incomes in 1983 are lower than the salaries which would have been projected using the 1980 incomes, assuming an 8 percent increase in income. The actual annual rates of change emphasize that most incomes have not increased at the originally-projected rate of 8 percent. Incomes for graduates of the Kellogg Graduate School of Management have increased at a slightly faster rate than previously assumed. Due to the lack of current information about average starting salaries for performing musicians, the 1980 salary, projected to 1983, was used.

A comparison of the results of the current and previous versions of the model is shown in Table 2. With the exceptions of Dentistry, Management and Music, the slower-than-projected increase in incomes has resulted in lower calculated debt principals for each program.

METHOD

The model may be described in terms of four steps. First, adjusted gross incomes were derived from starting salary data and then increased over a 15-year repayment period. Second, derivations were based on after-tax incomes, assuming itemized deductions. In the third step, the amount of after-tax income available for discretionary educational expenses was calculated. Using BLS standard budgets as the base, a progressive assessment schedule was applied to after-tax income which assumed that the "other family consumption" portion of the BLS budget was fully available for educational expenses. This provided a series of graduated repayments in which increased debt repayments occurred concomitant with increases in income. An equal repayment scheme was also developed by assuming that the amount available during the fifth year of the graduated plan was manageable for each year of the equal plan. In the fourth step, a present value calculation was used to determine the total debt principal which would be supported by each repayment stream. This provided an estimate of manageable debt assuming the full subsidy of interest during the in-school period. If it were assumed that in-school interest was capitalized, although the debt principals would remain the same, the amount available for educational purposes would decrease.

The following provides a step-by-step discussion of the calculations required to determine the income and manageable debt level figures presented in the tables. An example of a full 15-year repayment stream is shown in Table 3. It provides an example of each component of the method and should be referred to frequently.

I. Annual Income

Annual income figures were derived in the following manner. Salary statistics were analyzed to provide a best-estimate of the starting salary of the 1983 graduating class. It was assumed that half of the salary was earned during the latter part of 1983. The half-year salary amount was discounted at 6, 8 or 10 percent to derive an estimate of the income for the first half of 1983. The half-year figures were summed to provide a total 1983 annual income.

EXAMPLE: 1983 starting salary, effective 7/1/83 = $31,685

Half-year income, 7/1/83 - 12/31/83 = $15,842

Half-year income, 1/1/83 - 6/30/83 = $14,946
($11,000 discounted at 6%)

1983 annual income = $30,788

Actual 1983 annual incomes for each professional program are shown in the third column on Table 1. The "Notes for Table 1" describe the sources and rationale for determining the starting salaries which were the basis of the annual incomes. All incomes are assumed to reflect adjusted gross income, net of business expenses.

Annual incomes were increased at 6, 8 or 10 percent annually to derive starting income and projected income streams for the next 15 years.

II. After-Tax Income

After-tax income equals annual income minus federal, state and local, and FICA taxes.

A. State and Local Tax. 9.18 percent of adjusted gross income. This percentage is the population-weighted average of the state and other taxes allowance, for incomes greater than $15,000, used by the College Scholarship Service in the Uniform Methodology.

B. FICA Tax. FICA tax rates through year 1990 have been published by the federal government and these actual rates were used. For subsequent years, the FICA rate was increased at the average growth rate over the known years (refer to Table 4). The taxable wage base for 1981 was $29,700 and this base was increased at 6, 8, or 10 percent annually.

C. Federal Tax. Federal income tax was computed using actual tax rate schedules. The Economic Recovery Tax Act of 1981 established these schedules through year 1984. These are shown in Table 5. After 1984, the Tax Act authorized tax brackets and personal exemptions to be indexed to the consumer price index. In the model, 6, 8, and 10 percent annual growth rates have been used to derive the appropriate tax table for a given year. The following assumptions were made: married, family of two, filing a joint return, spouse not working, no unearned income.

EXAMPLE: 1985 annual income = $34,594

Compute after-tax income in year 1985, assuming 6 percent increase in income.

1. Compute state and local tax.

   34,594 x .0918 = 3,176

2. Compute FICA tax.

   34,594 x .0705 = 2,439

3. Compute federal tax. Index personal exemptions and tax brackets to the annual growth rate.

   Taxable income = 34,594 - (2,000 x 1.06)
   = 32,474

   ((3,400 x 1.06) - 0) x 0 = 0

   +((5,500 x 1.06) - (3,401 x 1.06)) x .11 = 245

   .

   .

   .

   + (32,474 - (29,901 x 1.06)) x .28 = 218

   =5,294

4. Calculate after-tax income.

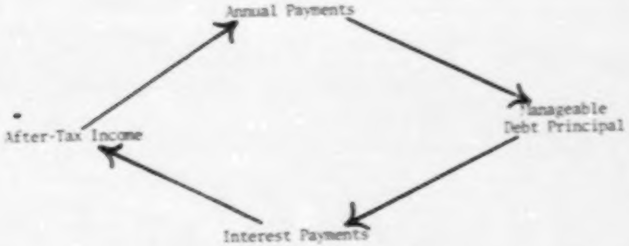
   34,594 - 3,176 - 2,439 - 5,294 = 23,685

   This value of after-tax income is after one iteration, before interest payments are deducted (see Section II. D. below). For subsequent iterations, FICA and state and local taxes are calculated as described. Federal tax is computed on annual income minus personal exemptions and interest payments.

D. Deduction of Interest Benefits. It was assumed that the family itemized deductions; i.e., the deductions for items such as medical expenses, home mortgage interest and charitable contributions at minimum cover the standard deduction. Therefore, the full amount of interest payments on the educational loan was considered deductible from taxable income.

When considering the tax benefits resulting from the deduction of interest payments, the amount of these payments simultaneously becomes both a function of, and a determinant of, the manageable debt principal. Thus, the model is circular. The computation of principal from repayments in the graduated plan (refer to Section III) differs from traditional lending models in which principal determines the annual repayment stream.

The relationship can be summarized as follows:



The benefit from interest payments on a specific loan principal will generate an increase in after-tax income. This will allow higher annual payments which result, in turn, in a new debt principal, starting the cycle again. The model follows this through three iterations, at which point the bulk of the impact has been realized.

Interest benefits were calculated by the formula:

$$p \times i$$

where p = principal
i = interest rate per month.

It should be noted that in the early years of graduated repayments, payments may be less than the interest due on the loan. If that occurs, the difference between the annual interest due and the annual manageable repayments is added to the principal. The principal begins to be reduced only when the annual repayments exceed the interest payments.

III. Graduated Repayments

A Repayment Assessment Table was developed which defines ranges for low, intermediate, high, and very high after-tax income brackets based upon the Bureau of Labor Statistics (BLS) 1979 standard budgets, adjusted for a family size of two (refer to Table 6). The after-tax income brackets on the Assessment Table were increased at the average compound growth rate for each starting salary over the first 10 years of repayment.

The amount of income which may be devoted to repayments of educational debts conforms to the BLS budget item designated "other family consumption." This estimate of discretionary income is the residual remaining after allowances for all of the following have been deducted from adjusted gross income: taxes, housing, food, clothing, transportation, personal, medical and other items. The absolute amount allowed for these necessities increases as one moves from the low to intermediate, high and very high budgets, thus reflecting an increased standard of living. However, the relative percentage of the total budget for necessities declines. Therefore, discretionary spending increases as a percentage of income at higher levels, and the Repayment Assessment Table is progressive in nature. The Assessment Table is shown in Table 6.

EXAMPLE: Management, class entering 1980, graduating 1982. Compute graduated repayment during 1985, assuming a 6 percent increase in income.

1985 annual income = $34,594

1985 after-tax income = $24,263

a. Compute average compound growth rate of after-tax income.

$$r = (ATI_{10} \;/\; ATI_1)^{1/9}$$

$$= (35{,}581 \;/\; 21{,}737)^{1/9}$$

$$= 1.05628$$

b. Compute standard budget bracket of after-tax income. As shown, 1985 after-tax income falls into the very high bracket.

$$\text{Very high} = 11{,}275 \times r^{y} \text{ and over}$$

$$= 11{,}275 \times 1.05628^{6} \text{ and over}$$

$$= 15{,}660 \text{ and over}$$

24,263 after-tax income exceeds 15,660

c. Compute manageable annual educational debt repayment.

$$(842 \times r^{y}) + (.149 \times (ATI - (11{,}274 \times r^{y}))) =$$

$$(842 \times 1.05628^{6}) + (.149 \times (24{,}263 - (11{,}274 \times 1.05628^{6}))) =$$

$$2{,}450$$

IV. Equal Repayments

The amount of each yearly repayment under the equal repayment option was defined as the amount paid during the fifth year of the graduated plan.

V. Total Debt Principal

The total debt principal is the same whether interest payments during the in-school period are fully subsidized or fully capitalized. The amount of debt available for educational costs is reduced if the interest is fully capitalized.

A. Full Subsidy of Interest During the In-School Period. The total debt principal is the present value of the repayment stream defined by each repayment option and total length of repayment (10 or 15 years). A 9 percent interest rate was assumed.

$$PV = \frac{P_1}{(1+i)} + \frac{P_2}{(1+i)^2} + \ldots \frac{P_n}{(1+i)^n}$$

where PV = Present Value of the Stream of Repayments (Total Debt Principal)

P = Monthly Payment

n = Month of Repayment

i = Interest Rate Per Month

EXAMPLE: Management, class entering 1980, graduating 1982, assuming a 6 percent increase in income. Compute principal for the graduated repayment option, for a 10 year repayment period, at a 9 percent interest rate.

$$PV = \frac{P_1}{(1 + i)} + \frac{P_2}{(1 + i)^2} + \dots \frac{P_n}{(1 + i)^n}$$

$$= \frac{2{,}195 \;/\; 12}{(1 + (.09 \;/\; 12))} + \frac{2{,}195 \;/\; 12}{(1 + (.09 \;/\; 12))^2} + \dots \frac{3{,}592 \;/\; 12}{(1 + (.09 \;/\; 12))^{120}}$$

$$= 18{,}017$$

Note: Repayment amounts reported in the tables are on an annual basis and must be adjusted for monthly payments.

B. Interest Capitalized During In-School Period. The total debt principal was calculated as in A above. However, since interest due on the educational loans was accrued and compounded in the fully capitalized examples, the total debt available for educational borrowing had to be reduced from the amount available if the interest had been fully subsidized. To estimate the loans available toward educational cost, the total debt was deflated by the 9 percent interest rate for each year of the educational program. The simplifying assumption was that all borrowing occurred in the first year. Therefore, for multi-year programs in which the educational loans are actually disbursed over two to four years, the debt available for educational cost is slightly understated.

VI. Cumulative Repayments

The total cumulative repayments, including both principal and interest, are the sum of the yearly repayments over 10 or 15 years.

Table 1: Annual Incomes

School/Program	Actual 1980 Annual Income*	Projected 1983 Income (1980 Base)**	Actual 1983 Annual Income***	Actual Annual Rate of Change, 1980-83
Dentistry	$32,115	$40,456	$28,800/ 46,230****	---
Journalism				
Advertising	21,185	26,687	19,200	(3.23)
Editorial	13,007	16,385	13,920	2.29
Law	26,482	33,360	32,640	7.22
Management	23,052	29,039	30,405	9.68
Medicine				
Residency	16,476	20,755	19,017	4.90
Practice	45,370	57,153	52,368	4.90
Music				
Performance	19,078	24,033	24,033	8.00
Teaching	11,852	14,930	13,680	4.90

* Actual 1980 incomes used in 1981 version of model.

** Actual 1980 incomes projected to 1983 at an assumed 8% annual growth rate.

*** Actual 1983 incomes used in 1983 version of model.

**** Dentistry incomes reflect split salary assumptions as described in "Notes" on the next page.

Notes for Table 1: The Derivation of 1983 Annual Incomes

Dentistry

Based upon discussions with Dental School personnel, the starting income figure of $30,000 was agreed upon for dentists just entering practice or an associateship. The "1979 Survey of Dental Practice," published by the American Dental Association, reported a median income (net of business expenses) of $35,397 for independent dentists in the 30 to 34-year-old age group. At an average annual growth rate of 8 percent, this would be $48,157 in 1983. Due to the marked increase in dentists' incomes following approximately a four-year period after graduation (generally an associateship), the model was adjusted to accept the lower income initially and then use the higher income after four years.

Journalism

A perusal of the current job listings for master's degree students showed a general range of $11,000 to $18,000. The figure of $14,500 appeared to be a reasonable midpoint for editorial/writing positions. Several Chicago area advertising agencies were contacted for information about current starting salaries. The figure of $20,000 was obtained from this survey.

Law

The Law School "Guide for Prospective Applicants" reported a median salary of $34,000 for the Class of 1982. The Law Schcol Dean did not anticipate any significant increase in 1983.

Management

The KGSM Office of Career Development and Placement reported a mean starting salary of $31,685 for the Class of 1983, as of April 18, 1983.

Medicine

Northwestern Medical School provided the figure of $19,80[illegible] for current first-year residents' annual salaries. This represented an increase of 15.8 percent (5 percent compounded annually) over the 198[illegible] salary of $17,110 used in the 198[illegible] version of the model. This annual figure is consistent with national statistics. The Association of American Medical Colleges reported in its 1982 Council of Teaching Hospitals' Survey that the national mean stipend for first-year residents was $18,910 for 1982-83.

A recent article in *Medical Economics* reported a 3 percent increase in physicians' average incomes from 1980 to 1981. The AMA's *Socioeconomic Monitoring System Reports* for 1981 and 1982 indicate quarterly changes in net income (after expenses) ranging from -9.0 percent to +11.4 percent, with the income of general and family practice doctors ranging from -6.0

Notes for Table 1 (continued)

percent to +4.7 percent. Based upon discussions with Medical School personnel and the variability of average incomes in the previous two years, it was decided to use the rate of increase for residents' salaries to inflate the beginning income for practicing physicians. This calculation yielded the figure of $54,550.

Music

The Music School provided several starting salary figures for teaching musicians. The figure of $14,250 appeared to be a reasonable midpoint in starting teaching salaries. Salaries for practicing musicians are extremely variable, and an estimate was not provided by the school. Therefore, the annual income used in the previous version of the model ($19,078) was increased at 6, 8, or 10 percent to derive a 1983 annual income.

Table 2: Comparison of 1981 and 1983 Versions

Manageable Debt Principals

Assumptions:

1. Class entering 1981.
2. Income growth rate 8 percent.
3. Loans at 9 percent interest.
4. Full subsidy of interest during the in-school period.
5. Principal is fully deferred during the in-school period.

	1981 Version		1983 Version	
School/Program	15 Year Graduated	15 Year Equal	15 Year Graduated	15 Year Equal
Dentistry	$48,175	$41,664	$49,742	$46,129
Journalism				
Advertising	22,261	19,234	13,434	11,577
Editorial	10,786	9,292	8,577	7,378
Law	34,846	30,342	34,065	29,660
Management	27,029	23,424	28,874	25,035
Medicine	74,257	68,315	67,000	59,000
Music				
Performance	20,567	17,804	20,567	17,804
Teaching	10,178	8,791	9,052	7,814

Notes

1. For all programs, the 1981 and 1983 versions differ with respect to annual incomes.

2. For Dentistry, income growth assumptions were changed. The 1981 version assumed a starting income of $33,350 which increased at a steady rate. The 1983 version assumes a starting income of $30,000 which increases at a steady rate over a four-year period of associateship. A higher salary of $48,157 is assumed when the dentist goes into full practice or another professional arrangement.

3. For Medicine, residency assumptions were changed. The 1981 version assumed a four-year residency. Principal and interest payments were fully deferred during the first two years, full payments were made in the last two years. The 1983 version assumed a three-year residency. Annual interest payments are made at 5.5 percent of adjusted gross income, the remainder is capitalized.

Table 3: Annual Repayments for Graduated and Equal Repayment Examples, Fully Subsidized Interest

Management -- Class Entering 1980

Year	Annual Income (6% Compounded Annually)	After-Tax Income	Graduated Repayments	Equal Repayments
1983	30,788	21,737	2,195	2,743
1984	32,636	23,038	2,330	2,743
1985	34,594	24,263	2,450	2,743
1986	36,669	25,641	2,590	2,743
1987	38,869	27,136	2,743	2,743
1988	41,202	28,718	2,906	2,743
1989	43,674	30,388	3,078	2,743
1990	46,294	31,923	3,225	2,743
1991	49,072	33,703	3,404	2,743
1992	52,016	35,581	3,592	2,743
1993	55,137	37,555	3,790	2,743
1994	58,445	39,637	3,999	2,743
1995	61,952	41,827	4,218	2,743
1996	65,669	44,132	4,448	2,743
1997	69,609	46,562	4,690	2,743

	Graduated Repayments	Equal Repayments
10 Year Repayment		
Total Debt Principal	18,017	18,045
Cumulative Repayments	28,513	27,430
15-Year Repayment		
Total Debt Principal	24,877	22,537
Cumulative Repayments	49,658	41,145

Read table as follows: Management, class entering 1980, graduating 1982 (two-year program). Begin repayments in 1983. An annual income of $30,788 in 1983 will increase at a 6 percent rate to $69,609 in 1997. After-tax income shows annual income after reduction for taxes, assuming itemized deductions. Graduated repayments were calculated by applying the "Repayment Assessment Schedule" to after-tax income. Equal repayments equal the amount paid during the fifth year of the graduated repayment example. Repayments include principal and interest. Total debt principal reflects principal portion of repayments. Cumulative repayments reflect the sum of principal and interest over the 10 or 15-year period.

Table 4: FICA Tax Rates

Year	FICA Tax Rate
1982	6.70%
1983	6.70
1984	6.70
1985	7.05
1986	7.15
1987	7.15
1988	7.15
1989	7.15
1990	7.65
1991	7.79*
1992	7.93
1993	8.06
1994	8.20
1995	8.34
1996	8.48
1997	8.62
1998	8.76
1999	8.89
2000	9.03
2001	9.17
2002	9.31
2003	9.45
2004	9.58
2005	9.72

* Begin projected values.

Table 5: Federal Income Tax Rate Schedules

Taxable Income, Joint Return*	Tax Rate (%)			
	1981	1982	1983	1984
$ 0 to $ 3,400	0	0	0	0
3,401 to 5,500	14	12	11	11
5,501 to 7,600	16	14	13	12
7,601 to 11,900	18	16	15	14
11,901 to 16,000	21	19	17	16
16,001 to 20,200	24	22	19	18
20,201 to 24,600	28	25	23	22
24,601 to 29,900	32	29	26	25
29,901 to 35,200	37	33	30	28
35,201 to 45,800	43	39	35	33
45,801 to 60,000	49	44	40	38
60,001 to 85,600	50	49	44	42
85,601 to 109,400	50	50	48	45
109,401 to 162,400	50	50	50	49
162,401 to 215,400	50	50	50	50
215,401 and over	50	50	50	50

* Annual income minus personal exemptions.

Table 6: Graduated Repayment Assessment Table

After-Tax Income (ATI) Brackets	Manageable Annual Educational Debt Repayment
Low	
0 to $(5{,}386 \times r^y)$	$.051 \times ATI$
Intermediate	
$5{,}387 \times r^y$ to $8{,}115 \times r^y$	$(275 \times r^y) + (1{,}086 \times (ATI - (5{,}386 \times r^y)))$
High	
$8{,}116 \times r^y$ to $11{,}274 \times r^y$	$(510 \times r^y) + (.105 \times (ATI - (8{,}115 \times r^y)))$
Very High	
$11{,}275 \times r^y$ and over	$(842 \times r^y) + (.149 \times (ATI - (11{,}274 \times r^y)))$

Note: r = average compound growth rate of ATI over first 10 years of repayment

To calculate: $r = (ATI_{10}/ATI_1)^{1/9}$

y = number of years after 1979

Mr. **Petri**. I'm curious, Ms. Popik, when you talk about percentage of annual adjusted gross income that might be available for paying debts, and you place it as somewhere in the 4- to 8-percent range of adjusted gross income, would that mean after taxes, after the deductibility of that interest? Are you talking about 2 percent as the most that people can afford to pay of their income? Are you talking about after tax or before tax dollars? These are deductible, aren't they?

Ms. **Popik**. We have taken into account in making our determinations the deductibility of the interest benefits. Our model is a circular model and we go round and round with several iterations in which one is to deduct the interest benefits on the loans. The figure that I used to determine the percentages is an adjusted gross income, so it takes into account the deductions for business expenses and our percentages are calculated after the fact, so we have already looked at interest benefits being deducted.

Mr. **Petri**. Dr. Sussman.

Dr. **Sussman**. Yes, sir.

Mr. **Petri**. We've been debating around here the mix between work study programs and grants and loans, and one of the concerns about expanding work study that was expressed in previous testimony was that it might be unfair to some students if they were in intensive fields or if they had to work harder to keep their grades up than students who were quite able and didn't have to spend much time with the books. Therefore it could be somewhat discriminatory, to declare people able to work while they were in school rather than giving them grants. Do you have any comments about all of that? Do you think that concern is well founded or do you think it's not?

Dr. **Sussman**. It's a fact of graduate school existence these days that most work at one job or another. The data I have provided reveal that, for example, teaching assistanceships and research assistanceships as well as work outside the university are a source of income for most of them. Therefore, I take the view that unless the milennium comes that's going to continue and be a necessary component of the support we can provide.

The other aspect of the question I would like to deal with has to do with the fact that work study helps not only the graduate student but also the universities which are the recipients of the benefits from the work done.

Mr. **Petri**. There are some graduate schools, though, that prohibit their students from working, as I understand it. Georgetown Medical School was mentioned by someone. So, that would bar their students from taking advantage of these programs, unless they were to change their rules.

Dr. **Sussman**. There are very great differences between medical education and the rest of the educational process. I suspect that the particular needs of medical students are such that it would be very difficult for their people to work during the course of their education.

On the other hand, there is a kind of work they do in clinical practice, so in fact they are performing work during that time, but it's educational work of a kind that work study often provides for better students.

Mr. **Petri**. Thank you.

Mr. Packard, do you have any questions?

Mr. **Packard**. Thank you, Mr. Chairman.

I am sorry I couldn't hear all your verbal testimony. I've reviewed, briefly, your written testimony. Most of you are here representing schools that normally would be considered a higher cost school than just the average. Do you feel that students ought to be given equal opportunity through the loan programs, the guaranteed student loan program, to attend the higher cost institutions as well as those that would be the normal run of the mill university and college institutions in America?

Dr. **Sussman**. May I address that for a moment? Then I will open the floor to my colleagues.

Mr. **Packard**. Certainly.

Dr. **Sussman**. I take the view that access has at least two components. It has an absolute component which is can you go to school at all. And I would hope that the testimony that we have provided and our colleagues who preceded us will reveal our strong feeling that minorities and poor people in general should have access to education. But there is a second component of access which I think should be emphasized and that is that students should also have the option of attending the schools of their choice. There is a wide diversity of education available for students, for some. One level of institution is just what they want and need. For others, perhaps, the aspirations should be different and they should have the opportunity to select those institutions themselves.

As times get tougher economically, for example, there is the feeling among some students that they must have careers which are available only in one kind of institution, and there may be other reasons why they would like to be selective in their choice of institutions. So, if we consider both those aspects of access, I think we should be providing the opportunities for both.

Ms. **Popik**. The results of our research at Northwestern, I believe, point to the fact that students at both public and private institutions are going to be affected if the GSL program is not expanded to allow increased debt capability, in some ways. The problems with debt are not limited at this point any more to high cost institutions, and with undergraduate debt rising the way it is and graduate and professional students not, at this point, having a lot of other support available to them, it's a phenomenon that goes across both types of institutions.

Mr. **Sanderson**. I would like to add as well that we think very strongly that it's in the national interest for the students to be allowed the choice to attend the best program that they can get into. That doesn't always mean a high cost program. This year may be an anomaly but the graduate program in geography at Penn State is rated higher than their football team. We feel that if a student would like to study statistics at the University of Iowa or Iowa State, they are very good places to go. Or if you wanted to study linguistics, the University of Massachusetts. These are departments specific, in many cases, and that programs that are portable such as the NSF awards or the proposed graduate fellows program, that allow a student to be matched as best he can with the department, and that's clearly in the student's interest and the national interest.

Mr. PACKARD. If we not only raise the debt ceiling, but also place in the regulations the language that would indicate that the debt could be waived under certain circumstances of post university or college graduation, would that not induce abuse of the loans and perhaps encourage a waiving of the debt, and therefore become a greater burden upon the taxpayers?

Ms. POPIK. I can only respond in terms of personal perception, and if you're talking about a repayment period that's extended to 15 years, then for a student to make a life decision as to what career they want to go into and the way they want to spend the major portion of their working life, I personally find it hard to think they would be driven by thoughts of getting around the system.

There are always one or two people who do that, but I would be surprised the students who go into graduate and professional education would make those types of decisions. They're concerned with the next 30 years and their quality of life.

Mr. PACKARD. You represent particularly the professions at Northwestern.

Ms. POPIK. Yes.

Mr. PACKARD. It would appear to me that a graduating dentist, and I speak now from personal experience, being a dentist myself, that within a year or two most dentists can repay almost all loans that they may need to get through school. But if they had guaranteed student loans that could be extended for 15 or up to 20, 30 years, at low interest rates, preferred interest rates, I know dentists are generally very poor businessmen and women, but they would not normally be that bad. They would choose to extend and use that repayment schedule, to use their funds elsewhere. Would that give you some concern or do you think that those kinds of abuses—and I consider that an abuse—would be encouraged?

Ms. POPIK. The recommendations that I make in my testimony do not preclude going to market interest rates when the student is out of school. One of the points that I hope is clear from my testimony is that we can make the programs costlier to the students when they are out of school as long as we remember certain things about making that debt manageable for them to repay.

So, if there are certain mechanisms that are put into place to not influence their choice to get around the system and going to market rates is a reasonable way of doing that, once they are out of school, then I think if we remember that consolidation stays in place, and a 10- to 15-year plan may be reasonable, that that might take care of some of your concerns. I would hope.

Mr. PACKARD. Thank you very much.

Mr. PETRI. Thank you, Mr. Packard.

Mr. Blakey, do you have questions?

Mr. BLAKEY. I have a couple of questions.

I have two questions for Dr. Sussman and maybe some for the panel in general.

What would be your reaction, Dr. Sussman, you emphasized college work study in your direct testimony. What would be your reaction to—I'm going to use this word advisedly—a "flexible" set aside of up to 10 percent of the college work study money which the president of the institution or the chancellor could decide that could be allocated to graduate students?

Dr. SUSSMAN. There is one thing which we need more than anything else. It is flexibility, sir. And it seems to me that that works in just the right direction.

Mr. BLAKEY. Ms. Popik, you mentioned two or three things in your direct testimony which I want to pursue. Perhaps Dr. Sussman may want to comment on one of these as well. The question of independent students, if I understood you, Dr. Sussman, you were recommending that immediately upon entry you would be presumed independent.

Dr. SUSSMAN. Yes.

Mr. BLAKEY. For purposes of determining eligibility. As a financial aid officer, Ms. Popik, does that give you any pause or would you agree with that recommendation?

Ms. POPIK. H-m-m. As a financial aid officer I am torn. I pull in two directions. One is that I believe that the funds should be accessible to the students and that I see at the professional level where I work that there is not the same—I've worked in both undergraduate and graduate professional education. There is not the same willingness or ability to contribute for the graduate and professional education and so I think there needs to be the funds, the availability of the Federal funds, for those students.

I think that the schools can then properly administer those funds to the neediest students with internal regulation on their part, but without having the access to the funds there. It would cut off funds to many needy students and leave a gap, in many cases.

Mr. BLAKEY. Let me try to rephrase that and be sure I understand what your response is, Dr. Sussman. Would you have a problem if that independence was presumed if the student was, say, past some arbitrary age of 22 or was enrolled as a first year graduate student, if that student was required to demonstrate that, in fact, the presumption was accurate, that is, they had to show that, in fact, they were not receiving money from their parents and, in fact, were sustaining themselves by some form of indicating with a tax form or checks on that employee or something like that? In other words, the presumption is there but if the student aid officer, for example, asked you to show that you, in fact, aoe independent, would that be problematical for you?

Dr. SUSSMAN. Well, it's not problematical, as in the present case. A student can indicate that parental income is not part of his support and, therefore, does not have to provide the forms and all the rest. So, I would suggest the current system has worked pretty well, although it requires the filling out of needs forms and so on.

Mr. BLAKEY. OK, let me ask all three of you, then, this general question: Let me pose to you four options and ask you to indicate your preference, not for one of them, but which order do you put them in, if you were faced with the decision, Mr. Simon and Mr. Packard, and Mr. Petri are going to be faced with and you had these four options: Eliminate the original fee; expand G*POP and the national graduate fellowship program; expand access to work study for graduate students; or increase loan limits to $10,000 or some lesser number?

In what order would you put those in terms of policy options? Which would you do first? We may not be able to do all four is the underlying suggestion I am making. Which would you do first? Which is more important from your point of view?

Mr. SANDERSON. I started my testimony saying how diverse these options were. I'd say none of the above. The community is diverse. Now you will find out a case study right here.

Mr. BLAKEY. All right.

Mr. SANDERSON. If I jotted them down correctly as you were saying them, we have an origination fee, G*POP, graduate fellows programs, college work study, and loan limits. Those are the four.

Mr. BLAKEY. Yes; that's right.

Mr. SANDERSON. One of the things that bothers me in counselors students and departments and working through budgets at a not poor institution is that there is an increasing burden on the graduate student or the potential graduate student, the applicant. They are deterred by the high cost, As programs lengthen, as they are required, as they might be through work study, to work more, this would lengthen the time that they're in graduate school and that acts as a deterrent and reduces their ability or their time period over which they can gain income.

Our preference would be for a greatly expanded G*POP and graduate fellows program that would allow students to pursue their careers with as much choice and with all rapidity possible.

Second, would probably be an increase in work study, and I'm fairly indifferent on the loan limits and the original fee. I would not like to see the origination fee increased, however.

Mr. BLAKEY. How about getting rid of it?

Mr. SANDERSON. Do you want to talk about eliminating it?

Mr. BLAKEY. Yes.

Mr. SANDERSON. Then I would rank that third with the increased loan limit fourth.

Mr. BLAKEY. OK.

Ms. POPIK. It is clear you will see the differences in our disciplines in our answers to this question. I would rank first the expanding the loan limits, to provide more access to the loan funds for my students. And second would be the elimination of the origination fee. However, on that note, I too am opposed to increasing the origination fee, and if some mechanism could be made for moving it to the back end process rather than having it as an up front deduction, if it's not eliminated, that would be a reasonable mechanism.

I think that the origination fee is an unrecognized, unmet need factor, so that if schools don't have sufficient funds to fill that gap it's a real gap at five percent in the student's budget. I mean, that's a book allowance for a whole year and it's an unmet need factor. a whole year and it's an unmet need factor.

So, if it can be eliminated, it would be my second choice. If not, moved to the back end. And I have no preference. Well, I do. I would prefer work study over G*POP and the graduate fellowships.

Dr. SUSSMAN. At the risk of offending the female colleague here, I will hold with an order which is closer to Dean Sanderson. [Laughter.]

It seems to me that G*POP and related fellowship programs are essential. I think that is part of the societal need which we just might address. I also believe that work study affects a large number of people and performs multiple roles, as I mentioned earlier. And I would put that second.

I believe the origination fee also is a problem and to some extent is a hidden cost, as has been said, and would put that third for reasons which go to the heart of the difference between graduate programs and professional programs. I believe that we should assure larger loans simply because it's too tempting to use them instead of other, and I think more appropriate, forms of support.

Mr. **Blakey**. Thank you very much.

Mr. **Petri**. Thank you.

Mr. Gunderson, do you have any questions?

Mr. **Gunderson**. Coming in at this point, no questions.

Mr. **Petri**. No questions. All right. I'd like to thank all of the witnesses for your very helpful testimony. I'm particularly interested, Ms. Popik, in your discussion and suggestions and also yours, Mr. Sussman, for work study, and for some sort of income-contingent-loan program, if possible, and I hope as we try to go through the business of reauthorizing this program you'd be willing to work with members of the committee to see if we can come up with something of that sort.

One last question, perhaps. There is a lot of interest on the part of all of you in trying to figure out ways of having more flexibility in these different programs that we now have and that is good but then it tends to go against the idea of trying to have greater simplicity and clarity and certainty of administration and I wonder if you could—would you be interested at all in addressing that?

If we were trying to simplify some of these things and make them easier to administer, we're going to end up reducing flexibility. So how would you make those tradeoffs? Do you have any rough ideas?

Dr. **Sussman**. Well, I suppose I might suggest being flexible but unyielding. [Laughter.]

That is an important question and it seems to me like the various tradeoffs we've been discussing today, fellowship support, which is so important, work study and so on, it is so important for us to try to rationalize the entire process of support for graduate and professional students. If the reauthorization could accomplish one thing that, it would seem to me, would be most essential, because taking one component out of all of the forms of support and asking about it, it seems to me makes it almost impossible to come to grips with the basic question, which is a coherent whole which is based upon sober reflection so that each component is considered as part of that whole.

Ms. **Popik**. All I would like to do is indicate my support for your concern as a practicing financial aid officer. The programs are getting more and more unwieldy and we lose sight of the bigger picture because our day-to-day operations are focused on maintaining all the different regulations as they change, the cumulative effect of that.

Mr. **Petri**. Thank you all.

[Whereupon, at 11:42 a.m., the subcommittee recessed, subject to the call of the Chair.]

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